Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR POLLUTION CONTROL PERMIT

Permittee Name:	ISP CHEMICALS INC.
Mailing Address:	P.O. Box 37 Calvert City, Kentucky 42026
Source Name:	ISP CHEMICALS Inc.
Mailing Address:	Same as above
Source Location:	Highway 95 Calvert City
Permit Type:	Federally-Enforceable
Review Type:	NSPS, NESHAP, Title V, Synthetic Minor
Permit Number:	V-99-038
Log Number:	F070
Application Complete Date:	February 18, 1997
KYEIS ID #:	072-2600-0003
AFS Plant ID #:	21-157-00003
SIC Code:	2869
Region:	Paducah/Cairo
County:	Marshall
Issuance Date:	
Expiration Date:	

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John E. Hornback, Director
Division for Air Quality

DEP7001 (1-97)

Revised 5/24/99

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SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application which was determined to be complete on February 18, 1997, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES,APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

EMISSION UNIT: FORMALDEHYDE (FOR) PRODUCTION UNIT

Emission Point(s)	Process ID	Process Description
01 (FOR)	232/3001	Blend Absorber Feed Water Tank
	232/3301	West A Reactor
	232/3302	East B Reactor
	232/3402	Absorber
	330/3001	Methanol Feed Tank
	330/3006	Formaldehyde Product Tank
	330/3007	Formaldehyde Product Tank
	V2LOAD	V2 Loading Rack Arm
	W2LOAD	W2 Loading Rack Arm
	--	Fugitive Components in VOC Service

Emission Point(s)	Process ID	Description	Control Equipment
01 (FOR)	232/3402	Absorber	Catalytic Incinerator 232/5305

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart F) *National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry.*
401 KAR 63:002 (40 CFR 63 Subpart G) *National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*.
401 KAR 63:002 (40 CFR 63 Subpart H) *National emission standards for organic hazardous air pollutants for equipment leaks.*
401 KAR 50:055. *General Compliance Requirements.*

For purposes of applicability of 40 CFR 63 Subparts F, G, and H, the formaldehyde CMPU is considered to begin at the first flange on the reactor's vaporizers, and to end at the first flange after the "T" juncture on the pipeline transporting formaldehyde solution to the butynediol (B3D) production unit. The formaldehyde CMPU includes the piping after the "T" junction leading to the loading rack arms.

***330/3006 Formaldehyde Product Tank*:** 330/3006 Formaldehyde Product Tank is a Group 2 storage vessel as defined in 40 CFR 63 Subpart G, Section 63.111, since the maximum true vapor pressure of organic HAPs in the liquid stored does not equal or exceed 5.2 kilopascals.

***330/3007 Formaldehyde Product Tank*:** 330/3007 Formaldehyde Product Tank is a Group 2 storage vessel as defined in 40 CFR 63 Subpart G, Section 63.111, since the maximum true vapor pressure of organic HAPs in the liquid stored does not equal or exceed 5.2 kilopascals.

***232/3001 Blended Absorber Feed Water Tank*:** 232/3001 Blended Absorber Feed Water Tank is not a surge control vessel in organic HAP service as defined in 40 CFR 63 Subpart H, Section 63.161, since the organic HAP content of the tank does not exceed 5 percent by weight on an annual average basis.

V2 and W2 Loading Rack Arms: V2 and W2 Loading Rack Arms are a Group 2 transfer rack as defined in 40 CFR 63 Subpart G, Section 63.111, since the maximum true vapor pressure of organic HAPs loaded through V2 and W2 loading rack arms does not equal or exceed 10.3 kilopascals.

232/5303 Catalytic Incinerator Process Vent: 232/5303 Catalytic Incinerator Process Vent is a Group 1 process vent as defined in 40 CFR 63, Section 63.111.

Absorber 232/3402 Heat Exchange System: As specified in 40 CFR 63 Subpart F, Section 63.104(c)(1), the absorber heat exchange system is exempt from the leak detection and repair requirements of 40 CFR 63 Subpart F, Sections 63.102(b)(1) and (2), since the system is operated with the minimum pressure on the cooling water side at least 35 kPa greater than the maximum pressure on the process side.

1. Operating Limitations:

232/5303 Catalytic Incinerator Process Vent:

a) Pursuant to 40 CFR 63 Subpart A, Section 63.6(e)(3)(ii), during periods of startup, shutdown, and malfunction the permittee shall maintain and operate the catalytic incinerator, process equipment venting to the incinerator, and incinerator temperature monitoring system in accordance with the procedures specified in the formaldehyde unit Startup, Shutdown, and Malfunction Plan. As required by 40 CFR 63.6(e)(1)(ii), malfunctions shall be corrected as soon as practicable after their occurrence, in accordance with the Startup, Shutdown, and Malfunction Plan. As required by 40 CFR 63.6(e)(3)(i), the formaldehyde unit Startup, Shutdown, and Malfunction Plan is hereby incorporated by reference into this permit.

b) Pursuant to 40 CFR 63 Subpart A, Section 63.6(e)(1)(i), at all times, including periods of startup, shutdown, and malfunction, the formaldehyde unit and associated air pollution control equipment shall be maintained and operated consistent with good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.

Fugitive VOC Components in Organic HAP Service:

c) Pursuant to 40 CFR 63 Subpart H, Section 63.162(c), each piece of equipment to which Subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to Subpart H. Identification of the equipment does not require physical tagging of the equipment.

d) Pursuant to 40 CFR 63 Subpart H, Section 63.162(f), when each leak is detected as specified in 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.174, and as specified in this permit, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on a valve or connector may be removed after it has been monitored and no leak has been detected during follow-up monitoring. The identification on equipment other than valves or connectors may be removed after it has been repaired.

e) Pursuant to 40 CFR 63 Subpart H, Sections 63.171(a) and (b), delay of repair of equipment for which leaks have been detected is allowed in the following cases:

1) The repair is technically infeasible without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
2) The equipment is isolated from the process and does not remain in organic HAP service.

Pressure Relief Devices in Gas/Vapor Organic HAP Service:

f) Pursuant to 40 CFR 63 Subpart H, Section 63.165(a), except for pressure releases pressure release devices in gas/vapor organic HAP service shall be operated with an instrument reading of less than 500 ppmv above background, except as follows:

1) As specified by 40 CFR 63.165(b)(1), after each pressure release the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 ppmv above background as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171;
2) As specified by 40 CFR 63.165(c), any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in 40 CFR 63.172; and

f) 3) As specified in 40 CFR 63.165(d), any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device, provided that after each pressure release the permittee installs a rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171.

Sampling Connection Systems in Organic HAP Service:

g) Pursuant to 40 CFR 63 Subpart H, Section 63.166, each sampling connection system in organic HAP service shall be equipped with a closed-purge, closed-loop, or closed-vent system that meets the specifications of 40 CFR 63.166(b) to collect or capture the sample purge for return to the process, except as follows:
1) Gases displaced during filling of the sample container are not required to be collected or captured; and
2) In-situ sampling systems and sampling systems without purges are exempt from the above requirements.

Open-Ended Valves and Lines in Organic HAP Service:

h) Pursuant to 40 CFR 63 Subpart H, Section 63.167(a), each open-ended valve or line in organic HAP service shall be equipped with a cap, blind flange, plug, or a second valve, except as follows: The cap blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves.

1) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the above requirements.
2) As specified in 40 CFR 63.167(e), open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs 40 CFR 63.167(a) through (c) are exempt from the requirements of 40 CFR 63.167(a) through (c).

Valves in Gas/Vapor or Light Liquid Organic HAP Service:

i) Pursuant to 40 CFR 63 Subpart H, Section 63.168(f), when a leak is detected for a valve in gas/vapor or light liquid organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices specified in 40 CFR 63.168(g). Pursuant to 40 CFR 63 Subpart H, Section 63.171(c) and (e), delay of repair of leaking valves is allowed if:

1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 63.172; or
2) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

Pumps in Heavy Liquid Organic HAP Service:

j) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(c), when a leak is detected for pumps in heavy liquid organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Pursuant to 40 CFR 63 Subpart H, Section 63.171(d), delay of repair of leaking pumps is allowed if:

1) Repair involves replacing the existing seal design with a new system that the owner or operator has determined under the provisions of 40 CFR 63.176(d) will provide better performance, or a dual mechanical seal system that meets the requirements of 40 CFR 63.163(e); a pump that meets the requirements of 40 CFR 63.163(f); or a closed-vent system and control device that meets the requirements of 40 CFR 63.163(g).
2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

Valves in Heavy Liquid Organic HAP Service:

k) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(c), when a leak is detected for valves in heavy liquid organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the best practices described in 40 CFR 63.168(g). Pursuant to 40 CFR 63 Subpart H, Section 63.171(c) and (e), delay of repair of leaking valves is allowed if:

1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 63.172; or

2) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

Connectors in Heavy Liquid Organic HAP Service:

l) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(c), when a leak is detected for connectors in heavy liquid organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Pursuant to 40 CFR 63 Subpart H, Section 63.171(c), delay of repair of leaking connectors is allowed if:
1) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair; and
2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 63.172.

Pressure Relief Devices in Liquid Organic HAP Service:

m) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(c), when a leak is detected for pressure relief devices in liquid organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Instrumentation Systems in Organic HAP Service:

n) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(c), when a leak is detected for instrumentation systems in organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

Connectors in Gas/Vapor or Light Liquid Organic HAP Service:

o) Pursuant to 40 CFR 63 Subpart H, Section 63.174(d), when a leak is detected for connectors in gas/vapor or light liquid organic HAP service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 and 40 CFR 63.174(g). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

p) Pursuant to 40 CFR 63 Subpart H, Section 63.174(h)(2), if any inaccessible or ceramic or ceramic-lined connectors in gas/vapor or light liquid organic HAP service are observed by visual, audible, olfactory, or other means to be leaking, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 40 CFR 63.171 and 40 CFR 63.174(g). A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

q) Pursuant to 40 CFR 63 Subpart H, Section 63.174(g), any connector in gas/vapor or light liquid organic HAP service that is designated, as described in 40 CFR 63.181(b)(7)(iii), as an unsafe-to-repair connector is exempt from the requirements contained in 40 CFR 63.174(a), (d), and (e) described above if: the permittee determines that repair personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(d); and the connector will be repaired before the end of the next scheduled process unit shutdown.

2. Emission Limitations:

232/5303 Catalytic Incinerator Process Vent:
Pursuant to 40 CFR 63 Subpart G, Sections 63.112 and 63.113(a)(2), the permittee shall reduce emissions of total organic HAP from the absorber by 98 weight percent or to a concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent, except for the following:

Pursuant to 40 CFR 63 Subpart F, Section 63.102(a)(1), the provisions of 40 CFR 63 Subparts F and G do not apply during periods of start-up, shutdown, and malfunction, as defined in 40 CFR 63.101, or periods of non-operation of the chemical manufacturing process unit (or specific portions thereof) resulting in a cessation of emission to which Subpart F and/or G apply.

Compliance Demonstration Method: Compliance shall be demonstrated based by the initial performance test as required by 40 CFR 63.116(c), continuous monitoring of catalytic incinerator temperatures as required by 40 CFR 63.114(a)(1)(ii), and operation of the incinerator within the temperature ranges submitted with the Notification of Compliance Status required by 40 CFR 63.114(e).

3. Testing Requirements:

232/5303 Catalytic Incinerator Process Vent:
Once during the permit term, the permittee shall retest and certify the catalytic incinerator. This testing will not be required if the HON unit has not been in operation for the previous six months. If additional testing is performed, pursuant to 40 CFR 63 Subpart F, Section 63.103(b)(3), the permittee shall conduct all performance tests at maximum representative operating conditions for the process. During the performance test, the permittee may operate the incinerator at maximum or minimum representative operating conditions for monitored temperatures, whichever results in lower emission reduction.

4. Specific Monitoring Requirements:

232/5303 Catalytic Incinerator Process Vent:

a) Pursuant to 40 CFR 63 Subpart G, Section 63.114(a), the permittee shall install and operate temperature monitoring devices equipped with a continuous recorder. Temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications, or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. Pursuant to 40 CFR 63.152(f)(1), the monitoring system shall measure data values at least once every 15 minutes.

b) Pursuant to 40 CFR 63 Subpart G, Section 63.114(d), the permittee shall install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. The flow indicator shall be installed at the entrance to any bypass line that could divert the absorber vent stream away from the incinerator and to the atmosphere.

c) Pursuant to 40 CFR 63 Subpart A, Section 63.8(c)(1)(i), the permittee shall ensure the immediate repair or replacement of the continuous temperature monitoring system parts to correct "routine" or otherwise predictable temperature monitoring system malfunctions as defined in the Startup, Shutdown, and Malfunction plan required by 40 CFR 63.6(e)(3). The permittee shall keep the necessary parts for routine repairs readily available.

Pressure Relief Devices in Gas/Vapor Organic HAP Service:

d) For pressure relief devices in organic HAP gas/vapor service, pursuant to 40 CFR 63 Subpart H, Section 63.165(b)(2), no later than 5 calendar days after each pressure release and being returned to organic HAP service, the pressure relief device shall be monitored to confirm the condition indicated by an instrument reading of less than 500 ppmv above background, as measured by the method specified in 40 CFR 63.180(c).

Valves in Gas/Vapor or Light Liquid Organic HAP Service:

e) Pursuant to 40 CFR 63 Subpart H, Section 63.168, and except as provided in 40 CFR 63.168(h) and (i), the permittee shall monitor valves in gas/vapor or light liquid organic HAP service at the intervals specified below, using the method specified in 40 CFR 63.180(b).

1) In Phase III, beginning on January 1, 1998, each valve shall be monitored as specified below. If an instrument reading of 500 ppmv or greater is measured, a leak is detected.
   i) At process units with 2 percent or greater leaking valves as calculated according to 40 CFR 63.168(e), each valve shall be monitored once per month. Alternatively, within the first year after the onset of Phase III the permittee shall implement a quality improvement program for valves that complies with 40 CFR 63.175(d) or (e) and monitor quarterly.
   ii) At process units with less than 2 percent leaking valves, each valve shall be monitored once each quarter, except as provided below.
   iii) At process units with less than 1 percent leaking valves, the permittee may elect to monitor each valve once every 2 quarters.
   iv) At process units with less than 0.5 percent leaking valves, the permittee may elect to monitor each valve once every 4 quarters.
2) When a leak is repaired, the repaired valve shall be monitored at least once within the first 3 months after its repair.

f) Pursuant to 40 CFR 63 Subpart H, Section 63.168(h), any valve in gas/vapor or light liquid organic HAP service that is designated, as described in 40 CFR 63.181(b)(7)(i), as an unsafe-to-monitor valve is exempt from the monitoring requirements contained in 40 CFR 63.168(b) through (f) and described above if: the permittee determines that the valve is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.168(b) through (d); and the permittee has a written plan that requires monitoring of the valve as frequently as practicable during safe to monitor periods.

g) Pursuant to 40 CFR 63 Subpart H, Section 63.168(i), any valve in gas/vapor or light liquid organic HAP service that is designated, as described in 40 CFR 63.181(b)(7)(ii), as a difficult-to-monitor valve is exempt from the monitoring requirements contained in 40 CFR 63.168(b) through (d) and described above if: the permittee determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at any time in a safe manner; and the permittee follows a written plan that requires monitoring of the valve at least once per calendar year.

Pumps in Heavy Liquid Organic HAP Service:

h) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(a) and (b), pumps in heavy liquid organic HAP service shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 5,000 ppmv or greater is measured, a leak is detected. If a potential leak in a pump is repaired as required in 40 CFR 63.169(c) and (d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b). For pumps that are not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that: the visual, audible, olfactory, or other indications of a leak have been eliminated; no bubbles are observed at potential leak sites during a leak check using soap solution or; the system will hold a test pressure.

Valves in Heavy Liquid Organic HAP Service:

i) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(a) and (b), valves in heavy liquid organic HAP service shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 500 ppmv or greater is measured, a leak is detected. If a potential leak in a valve is repaired as required in 40 CFR 63.169(c) and (d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b). For valves that are not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that: the visual, audible, olfactory, or other indications of a leak have been eliminated; no bubbles are observed at potential leak sites during a leak check using soap solution or; the system will hold a test pressure.

Connectors in Heavy Liquid Organic HAP Service:

j) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(a) and (b), connectors in heavy liquid organic HAP service shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 500 ppmv or greater is measured, a leak is detected. If a potential leak in a connector is repaired as required in 40 CFR 63.169(c) and (d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b). For connectors that are not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that: the visual, audible, olfactory, or other indications of a leak have been eliminated; no bubbles are observed at potential leak sites during a leak check using soap solution or; the system will hold a test pressure.

Pressure Relief Devices in Liquid Organic HAP Service:

k) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(a) and (b), pressure relief devices in liquid organic HAP service shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 500 ppmv or greater is measured, a leak is detected. If a potential leak in pressure relief device is repaired as required in 40 CFR 63.169(c) and (d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b). For devices that are not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that: the visual, audible, olfactory, or other indications of a leak have been eliminated; no bubbles are observed at potential leak sites during a leak check using soap solution or; the system will hold a test pressure.

Instrumentation Systems in Organic HAP Service:

l) Pursuant to 40 CFR 63 Subpart H, Sections 63.169(a) and (b), instrumentation systems in organic HAP service shall be monitored within 5 calendar days by the method specified in 40 CFR 63.180(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 500 ppmv or greater is measured, a leak is detected. If a potential leak in an instrumentation system is repaired as required in 40 CFR 63.169(c) and (d), it is not necessary to monitor the system for leaks by the method specified in 40 CFR 63.180(b). For instrumentation systems that are not monitored by the method specified in 40 CFR 63.180(b), repaired shall mean that: the visual, audible, olfactory, or other indications of a leak have been eliminated; no bubbles

are observed at potential leak sites during a leak check using soap solution or; the system will hold a test pressure.

Connectors in Gas/Vapor or Light Liquid Organic HAP Service:

m) Pursuant to 40 CFR 63 Subpart H, Sections 63.174(b)(3) and 63.174(c)(1)(i), and except as specified in 40 CFR 63.174(f) through (h), connectors in gas/vapor or light liquid organic HAP service shall be monitored at the intervals specified below, using the method specified in 40 CFR 63.180(b). If an instrument reading greater than or equal to 500 ppmv is measured, a leak is detected.

1) As specified by 40 CFR 63.174(b)(3)(i), each connector shall be monitored at least once per year if the percent leaking connectors in the process unit was 0.5 percent or greater during the last required annual or biennial monitoring period.
2) As required by 40 CFR 63.174(b)(3)(ii), each connector shall be monitored at least once every 2 years if the percent leaking connectors was less than 0.5 percent during the last required monitoring period. The permittee may comply with this requirement by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The percent leaking connectors will be calculated for the total of all monitoring performed during the 2-year period.
3) As specified by 40 CFR 63.174(b)(3)(iii), if the permittee is in a biennial leak detection and repair program and calculates less than 0.5 percent leaking connectors from the 2-year monitoring period, the permittee may monitor the connectors one time every 4 years. The permittee may comply with this requirement by monitoring at least 20 percent of the connectors each year until all connectors have been monitored within 4 years.
4) As specified by 40 CFR 63.174(b)(3)(iv), if the process unit is complying by using a 4-year monitoring interval described above and has greater than or equal to 0.5 percent but less than the 1 percent leaking connectors, the permittee shall increase the monitoring frequency to one time every 2 years. The permittee may comply with this requirement by monitoring at least 40 percent of the connectors in the first year and the remainder of the connectors in the second year. The permittee may again elect to return to the 4-year monitoring interval described above when the percent leaking connectors decreases to less than 0.5 percent.
5) As specified by 40 CFR 63.174(b)(3)(v), if the process unit is complying by using a 4-year monitoring interval described above and has 1 percent or greater leaking connectors, the permittee shall increase the monitoring frequency to one time per year. The permittee may again elect to return to the 4-year monitoring interval described above when the percent leaking connectors decreases to less than 0.5 percent.

6) As required by 40 CFR 63.174(c)(1)(i), and except as provided by 40 CFR 63.174(c)(1)(ii), each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic HAP service. If the monitoring detects a leak, it shall be repaired according to the provisions of 40 CFR 63.174(d), unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of 40 CFR 63.174(i)(2). As allowed by 40 CFR 63.174(c)(1)(ii), as an alternative the permittee may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the permittee may not count nonrepairable connectors for the purposes of paragraph 40 CFR 63.174(i)(2), and the permittee shall calculate the percent leaking connectors for the monitoring periods

described in 40 CFR 63.174(b) by setting the nonrepairable component, C(AN), in the equation in 40 CFR 63.174(i)(2) to zero for all monitoring periods. Switching between these two monitoring alternatives shall be governed by 40 CFR 63.172(c)(1)(iii).

7) As specified by 40 CFR 63.174(c)(2), as an alternative to the monitoring required by 40 CFR 63.174(b)(3), each screwed connector 2 inches or less in nominal inside diameter installed in the process unit before the dates specified in 40 CFR 63.174(c)(2)(iii) or (iv) may comply with the provisions of 40 CFR 63.174(c)(2)(i) through (iv).

n) As required by 40 CFR 63.174(c)(1)(i), and except as provided by 40 CFR 63.174(c)(1)(ii), each connector that has been opened or has otherwise had the seal broken shall be monitored for leaks when it is reconnected or within the first 3 months after being returned to organic HAP service. If the monitoring detects a leak, it shall be repaired according to the provisions of 40 CFR 63.174(d), unless it is determined to be nonrepairable, in which case it is counted as a nonrepairable connector for the purposes of 40 CFR 63.174(i)(2). As allowed by 40 CFR 63.174(c)(1)(ii), as an alternative the permittee may choose not to monitor connectors that have been opened or otherwise had the seal broken. In this case, the permittee may not count nonrepairable connectors for the purposes of paragraph 40 CFR 63.174(i)(2), and the permittee shall calculate the percent leaking connectors for the monitoring periods described in 40 CFR 63.174(b) by setting the nonrepairable component, C(AN), in the equation in 40 CFR 63.174(i)(2) to zero for all monitoring periods. Switching between these two monitoring alternatives shall be governed by 40 CFR 63.172(c)(1)(iii).

o) As specified by 40 CFR 63.174(c)(2), as an alternative to the monitoring required by 40 CFR 63.174(b)(3), each screwed connector 2 inches or less in nominal inside diameter installed in the process unit before the dates specified in 40 CFR 63.174(c)(2)(iii) or (iv) may comply with the provisions of 40 CFR 63.174(c)(2)(i) through (iv).

p) Pursuant to 40 CFR 63 Subpart H, Section 63.174(f), any connector in gas/vapor or light liquid organic HAP service that is designated, as described in 40 CFR 63.181(b)(7)(i), as an unsafe-to-monitor connector is exempt from the monitoring requirements contained in 40 CFR 63.174(a) if: the permittee determines that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (e); and the permittee has a written plan that requires monitoring of the connector as frequently as practicable during safe to monitor periods.

q) Pursuant to 40 CFR 63 Subpart H, Section 63.174(g), any connector in gas/vapor or light liquid organic HAP service that is designated, as described in 40 CFR 63.181(b)(7)(iii), as an unsafe-to-repair connector is exempt from the requirements contained in 40 CFR 63.174(a), (d), and (e) if: the permittee determines that repair personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(d); and the connector will be repaired before the end of the next scheduled process unit shutdown.

r) Pursuant to 40 CFR 63 Subpart H, Section 63.174(h), any connector in gas/vapor or light liquid organic HAP service that is inaccessible (as defined in 40 CFR 63.174(h)(1)) or is ceramic or ceramic-lined, is exempt from the monitoring requirements contained in 40 CFR 63.174(a) and (c), and the recordkeeping and reporting requirements of 40 CFR 63.181 and 40 CFR 63.182.

5. Specific Recordkeeping Requirements:

330/3006 and 330/3007 Formaldehyde Product Tanks:

a) Pursuant to 401 KAR 50:035 and 40 CFR 63 Subpart G, Sections 63.119(a)(3) and 63.123(a), for 330/3007 and 330/3007 Formaldehyde Product Tanks, the permittee shall retain records of the dimensions of each vessel and an analysis demonstrating the capacity of each vessel. Records shall be retained on site for a minimum of five years and for as long as each vessel is in operation and maintains Group 1 or Group 2 status.

V2 and W2 Loading Rack Arms:

b) Pursuant to 40 CFR 63 Subpart G, Sections 63.126(c) and 63.130(f), the permittee shall record and update annually the following information for V2 and W2 loading rack arms:
   1) An analysis demonstrating the total design and total actual annual throughput of the loading rack arms;
   2) An analysis documenting the weight percent organic HAPs in the liquid loaded; and
   3) Documentation of the organic HAPs, by compound, that are loaded.

Absorber 232/3402 Heat Exchange System (Requirements to become effective on April 22, 1999):

c) Pursuant to 40 CFR 63 Subpart A, Section 63.10(b)(3), the owner/operator shall keep a record of the determination that the absorber heat exchange system is not subject to a standard contain in 40 CFR 63. The record shall be kept on site for a period of 5 years after the determination is made.

Maintenance Wastewater (Requirements to become effective on April 22, 1999):

d) Pursuant to 40 CFR 63 Subpart F, Section 63.105(a), the following requirements apply to maintenance wastewaters containing those organic HAPs listed in Table 9 of 40 CFR 63 Subpart G.

e) Pursuant to 40 CFR 63 Subpart F, Section 63.105(b), the permittee shall prepare a description of maintenance procedures for management of the wastewaters containing those organic HAPs listed in Table 9 of 40 CFR 63 Subpart G that are generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:
   1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities.
   2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and
   3) Specify the procedures to be followed when clearing materials from process equipment.

f) Pursuant to 40 CFR 63 Subpart F, Section 63.105(c), the permittee shall modify and update the information required in Section 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewater generated in the preceding maintenance procedure.

g) Pursuant to 40 CFR 63 Subpart F, Section 63.105(e), the permittee shall maintain a record of the information required by Sections 63.105(b) and (c) as part of the Startup, Shutdown, and Malfunction Plan required under 40 CFR 63 Subpart A, Section 40 CFR 63.6(e)(3).

h) Pursuant to 40 CFR 63 Subpart F, Section 63.105(d), the permittee shall implement the maintenance wastewater procedures described in Sections 63.105(b) and (c) as part of the Startup, Shutdown, and Malfunction Plan required under 40 CFR 63 Subpart A, Section 63.6(e)(3).

232/5303 Catalytic Incinerator Process Vent:

i) Pursuant to 40 CFR 63 Subpart G, Section 63.117(a)(4), the permittee shall record and retain records of the results of performance tests conducted on the catalytic incinerator. The records shall include the following:

1) Temperatures upstream and downstream of the catalyst bed, and the temperature difference across the catalyst bed, averaged over the same time period of the performance testing; and
2) The percent reduction of organic HAP or TOC achieved by the incinerator determined as specified in 40 CFR 63.116(c), or the concentration of organic HAP or TOC (ppmv) determined as specified in 40 CFR 63.116(c) at the outlet of the incinerator on a dry basis corrected to 3 percent oxygen.

j) Pursuant to 40 CFR 63 Subpart G Sections 63.118(a) and 63.152(f), and Subpart A Section 63.103(c)(2), the permittee shall record and retain the following records for the 232/5305 catalytic incinerator temperature monitoring system:

1) The permittee shall record temperatures upstream and downstream of the catalyst bed.
2) The permittee shall record either: each measured value; or block average values for 15-minute or shorter periods calculated for all measured data values during each period, or at least one measured data value per minute if measured more frequently than once per minute.
3) If the daily average value of a monitored temperature parameter for a given operating day is within the range established in the Notification of Compliance Status, the permittee shall either:
   i) Retain block hourly average values for that operating day for 5 years and discard, at or after the end of that operating day, the 15-minute or more frequent average values and readings recorded under 5(d)(1) above; or
   ii) Retain the data recorded under 5(d)(1) above for 5 years.
4) If the daily average value of a monitored temperature parameter for a given operating day is outside the range established in the Notification of Compliance Status, the permittee shall retain the data recorded under 5(d)(1) above for 5 years. Daily average values of the upstream temperature and daily average values of the temperature difference across the catalyst bed shall be calculated for each operating day and retained for 5 years, except that if all recorded temperature values for an operating day are within the range established in the Notification of Compliance Status, the permittee

may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. For such operating days, the data recorded under 5(d)(2) above shall also be retained for 5 years.

5) Daily average values shall be calculated as the average of all values for a monitored temperature parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous. Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, zero (low-level) and high-level adjustments, startups, shutdowns, malfunctions, and periods of non-operation of the chemical manufacturing process unit (or portion thereof) resulting in the cessation of organic HAP emissions, shall not be included in calculating the daily averages. The operating day shall be the period defined in the Notification of Compliance Status.
6) The permittee shall record and retain records of the times and durations of temperature monitoring system breakdowns, repairs, calibration checks, zero (low-level) and high-level adjustments, startups, shutdowns, malfunctions, and periods of non-operation of the chemical manufacturing process unit (or portion thereof) resulting in the cessation of organic HAP emissions.
7) As required by 40 CFR 63.103(c)(2), the permittee shall record and retain records of the occurrence and duration of each startup, shutdown, and malfunction in the operation of the temperature monitoring system during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur.
8) As required by 40 CFR 63.103(c)(2)(iii), the permittee shall record and retain records documenting the completion of calibration checks and maintenance specified in the monitoring system's manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

k) Pursuant to 40 CFR 63 Subpart G, Section 63.118(a)(3), the permittee shall record and retain the following records for the 232/5305 catalytic incinerator bypass flow indicator system:

1) Hourly records of whether the flow indicator was operating;
2) Hourly records of whether flow was detected at any time during the hour;
3) Times and durations of all periods when the vent stream is diverted from the incinerator; and
4) Times and durations of all periods of process operation when the flow indicator system is not operating.

l) Pursuant to 40 CFR 63 Subpart A, Sections 63.6(e)(3)(i) and (v), the permittee shall develop and implement a written Startup, Shutdown, and Malfunction Plan that describes, in detail, procedures for operating and maintaining the catalytic incinerator, formaldehyde unit CMPU equipment vented to the incinerator, and incinerator temperature monitoring system during periods of startup, shutdown, and malfunction during which excess emissions (as defined in 40 CFR 63.102(a)(4)) are expected to occur. The plan shall include a program of corrective action for malfunctioning process and air pollution control equipment, and shall identify all routine or otherwise predictable continuous temperature monitoring system malfunctions.

m) Pursuant to 40 CFR 63 Subpart A, Section 63.6(e)(3)(viii), if the Startup, Shutdown, and Malfunction Plan fails to address or inadequately addresses an event during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occurred that meets the characteristics of a malfunction but was not included in the plan, the permittee shall revise the plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions.

n) Pursuant to 40 CFR 63 Subpart A, Section 63.6(e)(3)(v), the permittee shall retain the written Startup, Shutdown, and Malfunction Plan for the life of the formaldehyde unit or until the formaldehyde unit is no longer subject to 40 CFR 63 Subpart A, and shall keep the plan readily available for inspection. In addition, if the plan is revised the permittee shall retain previous (i.e., superseded) versions of the plan for a period of 5 years after each revision of the plan.

o) Pursuant to 40 CFR 63 Subpart A Section 63.6(e)(3)(iii) and Subpart F Section 63.103(c)(2), the permittee shall record and retain records of the occurrence and duration of each startup, shutdown, or malfunction of operation of the catalytic incinerator, formaldehyde unit CMPU equipment vented to the incinerator, and incinerator temperature monitoring system during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur.

p) Pursuant to 40 CFR 63 Subpart A Section 63.6(e)(3) and Subpart F Section 63.103(c)(2)(iii), for each startup, shutdown, and malfunction of operation of the catalytic incinerator, formaldehyde unit CMPU equipment vented to the incinerator, or incinerator temperature monitoring system during which excess emissions (as defined in 40 CFR 63.102(a)(4)) occur, the permittee shall keep records that demonstrate that the procedures specified in the Startup, Shutdown, and Malfunction Plan were followed. These records may take the form of a "checklist" or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. If an action taken is not consistent with the procedures specified in the plan, the permittee shall record the actions taken for that event.

Fugitive VOC Components in Organic HAP Service:

q) Pursuant to 40 CFR 63 Subpart H, Section 63.181, the following records and information shall be maintained in a manner that can be readily accessed at the plant site:

1) As required by 40 CFR 63.181(b)(1)(i), a list of identification numbers of equipment subject to Subpart H, except for instrumentations systems, and except for connectors exempt from monitoring and record keeping identified in 40 CFR 63.174. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to Subpart H are identified as a group, and the number of connectors subject to Subpart H is indicated.
2) As required by 40 CFR 63.181(b)(1)(ii), the monitoring schedule for connectors in gas/vapor or light liquid organic HAP service subject to 40 CFR 63.174(a). As provided by 40 CFR 63.174(h)(1), inaccessible, ceramic, or ceramic-lined connectors are exempt from the record keeping requirements of 40 CFR 63.181.
3) As required by 40 CFR 63.181(b)(1)(ii), the monitoring schedule for valves in gas/vapor or light liquid organic HAP service subject to 40 CFR 63.168(d).

4) As required by 40 CFR 63.181(b)(3)(i), a list of identification numbers for pressure relief devices in gas/vapor organic HAP service subject to 40 CFR 63.165(a).
5) As required by 40 CFR 63.181(b)(3)(ii), a list of identification numbers for pressure relief devices in gas/vapor organic HAP service equipped with rupture disks, under the provisions of 40 CFR 63.165(d).
6) As required by 40 CFR 63.181(b)(4), identification of instrumentation systems subject to Subpart H. Individual components in an instrumentation system need not be identified.
7) As required by 40 CFR 63.181(b)(6), for pumps in heavy liquid organic HAP service, records of design criteria for each dual mechanical seal system used for compliance in accordance with 40 CFR 63.171(d), an explanation of the design criteria, and any changes to these criteria and the reasons for the changes.
8) As required by 40 CFR 63.181(b)(7), for valves in gas/vapor or light liquid organic HAP service designated as unsafe to monitor or difficult to monitor under 40 CFR 63.168(h) and (i): identification of valves designated as unsafe to monitor or difficult to monitor; a list of identification numbers for valves designated as difficult to monitor; an explanation of why the valve is difficult to monitor; and the planned schedule for monitoring each difficult to monitor valve.
9) As required by 40 CFR 63.181(b)(7), for connectors in gas/vapor or light liquid organic HAP service designated as unsafe to monitor or unsafe to repair under 40 CFR 63.174(f) and (g): identification of connectors designated as unsafe to monitor; a list of identification numbers for connectors designated as unsafe to repair; and an explanation of why the connector is unsafe to repair. As provided by 40 CFR 63.174(h)(1), inaccessible, glass, or glass-lined connectors are exempt from the record keeping requirements of 40 CFR 63.181.
10) As required by 40 CFR 63.181(h), records specified in 40 CFR 63.181(h) for process units subject to the quality improvement program provisions of 40 CFR 63.175 and 40 CFR 63.176 for valves in gas/vapor and light liquid organic HAP service.
11) As required by 40 CFR 63.181(i), information, data, and analyses used to determine that a piece of equipment or process unit is in heavy liquid service. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of "in light liquid service".
12) As required by 40 CFR 63.181(d)(9), copies of Periodic Reports specified in 40 CFR 63.182(d), if records are not maintained on a computerized database capable of generating summary reports from the records.
13) As required by 40 CFR 63.181(d), when each leak is detected as specified in 40 CFR 63.168, 40 CFR 63.169, or 40 CFR 63.174, the following information shall be recorded and retained for 5 years:
    i) The instrument and the equipment identification number and the operator name, initials, or identification number.
    ii) The date the leak was detected and the date of first attempt to repair the leak.
    iii) The date of successful repair of the leak.
    iv) Maximum instrument reading measured by Method 21 after the leak is successfully repaired or determined to be unrepairable.
    v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak, including information specified in 40 CFR 63.181(d)(5)(i) and (ii).
    vi) Dates of process unit shutdowns that occur while the equipment is unrepaired.

vii) Identification, either by list, location (area or grouping), or tagging of connectors in gas/vapor or light liquid organic HAP service that have been opened or otherwise had the seal broken since the last monitoring period as described in 40 CFR 63.174(c)(1), unless the permittee elects to comply with 40 CFR 63.174(c)(1)(ii). Record of date and results of follow-up monitoring required by 40 CFR 63.174(c). If identification is made by location, then all connectors within the designated location shall be monitored.

General Recordkeeping: Pursuant to 40 CFR 63 Subpart F, Section 63.103(c), records and reports required by Subparts F, G, and H of 40 CFR 63 shall be retained at the source for a period of at least 5 years Records shall be kept readily accessible.

6. Specific Reporting Requirements:

Performance Tests:

a) Pursuant to 40 CFR 63 Subpart F, Section 63.103(b)(2), the permittee shall notify U.S. EPA Region IV and the Division's Paducah Regional Office of the intention to conduct a performance test at least 30 calendar days before the performance test is scheduled to occur.

Periodic Subpart G Reports:

b) Pursuant to 40 CFR 63 Subpart G, Sections 63.151(a)(4), 63.152(a)(4), and 63.152(c), the permittee shall submit semiannual Periodic Reports to U.S. EPA Region IV and the Paducah Regional Office. The first Periodic Report was submitted by May 19, 1998 Subsequent Periodic Reports shall be submitted no later than 60 calendar days after the end of each subsequent 6 month period. Periodic Reports must contain the following information:

1) As required by 40 CFR 63.117(a)(3), the data specified in 40 CFR 63.117(a)(4) and 40 CFR 63.152(c)(3) for any subsequent performance tests conducted after the Notification of Compliance Status has been submitted.
2) As required by 40 CFR 63.118(f)(1), daily average values of incinerator temperature upstream from the catalyst bed and daily average values of the temperature difference across the catalyst bed for all operating days when these values are outside the ranges established in the Notification of Compliance Status.
3) As required by 40 CFR 63.118(f)(2), duration of periods when incinerator temperature data is not collector for each excursion caused by insufficient monitoring data as defined in 40 CFR 63.152(c)(2)(ii)(A).
4) As required by 40 CFR 63.118(f)(3), times and durations of all periods when the incinerator vent stream is diverted from the incinerator through the bypass line.
5) As specified in 40 CFR 63.152(c)(4)(i), any supplements required by 40 CFR 63.151(j).
6) As required by 40 CFR 63.152(c)(4)(ii), notification of any Group 2 emission point becomes a Group 1 emission point, including a compliance schedule as required in 40 CFR 63.100.
7) As required by 40 CFR 63.152(c)(2)(iii), the daily average values of incinerator temperature upstream from the catalyst bed and daily average values of the temperature difference across the catalyst bed for both excused and unexcused excursions, as

defined in 40 CFR 63.152(c)(2)(ii)(A). For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified.

c) Pursuant to 40 CFR 63 Subpart G, Sections 63.152(c)(6), the permittee shall submit quarterly Periodic Reports to U.S. EPA Region IV and the Paducah Regional Office for a period of one year if the catalytic incinerator vent has more excursions that the number allowed under 40 CFR 63.152(c)(2)(ii)(B) during a semiannual reporting period, or for emission points for which the division requests quarterly Periodic Reports. Quarterly Periodic Reports shall include all information required in the semiannual Periodic Reports described above. Information applicable to other emission points within the CMPU shall be submitted in the semiannual Periodic Reports. Quarterly Periodic Reports shall be submitted no later than 60 calendar days after the end of each quarter. After quarterly Periodic Reports have been submitted for one year, the permittee may return to semiannual reporting unless the division requests that the permittee continue to submit quarterly reports.

Periodic Subpart H Reports:

d) Pursuant to 40 CFR 63 Subpart H, Sections 63.182(a)(3) and 63.182(d), the permittee shall submit semiannual Periodic Reports to U.S. EPA Region IV and the Paducah Regional Office. Periodic Reports must contain the following information:
   1) The number of valves in gas/vapor and light liquid organic HAP service for which leaks were detected as described in 40 CFR 63.168(b), the percent leakers, and the total number of valves monitored.
   2) The number of valves in gas/vapor and light liquid organic HAP service for which leaks were not repaired as required n 40 CFR 63.168(f), identifying the number of those that are determined nonrepairable.
   3) The number of connectors in gas/vapor and light liquid organic HAP service for which leaks were detected as described in 40 CFR 63.174(a), the percent of connectors leaking, and the total number of connectors monitored. As provided by 40 CFR 63.174(h)(1), inaccessible, ceramic, and ceramic-lined connectors are exempt from the reporting requirements of 40 CFR 63.182.
   4) The number of connectors in gas/vapor and light liquid organic HAP service for which leaks were not repaired as required in 40 CFR 63.174(d), identifying the numbers of those that are determined nonrepairable.
   5) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.
   6) The results of all monitoring of pressure relief devices in gas/vapor organic HAP service to show compliance with 40 CFR 63.165(a) conducted within the semiannual reporting period.
   7) If applicable for valves in gas/vapor and light liquid organic HAP service, the initiation of a monthly monitoring program under 40 CFR 63.168(d)(1), or a quality improvement program under 40 CFR 63.175 or 40 CFR 63.176.
   8) If applicable, notification of a change in monitoring alternatives for connectors in gas/vapor and light liquid organic HAP service as described in 40 CFR 63.174(c)(1).
   9) Any revisions to items reported in the Notification of Compliance Status required under 40 CFR 63.182(c) if the method of compliance has changed since the last report.

Other Reporting:

h) Pursuant to 40 CFR 63 Subpart G, Section 63.151(j), the permittee shall report to U.S. EPA Region IV and the Paducah Regional Office under the circumstances described below, unless the relevant information has been included and submitted in an operating permit application or amendment, or as otherwise specified by the permitting authority. The information shall be submitted within 180 calendar days after the change is made or the information regarding the change is known to the source. The update may be submitted in the next Periodic Subpart G Report if the change is made after the date the Notification of Compliance Status is due.

1) Whenever a deliberate change is made such that the group status of any emission point changes. The information submitted shall include a compliance schedule as specified in 40 CFR 63.100 if the emission point becomes Group 1.
2) Whenever the permittee elects to achieve compliance with 40 CFR 63 Subpart G by using a control technique other than that previously reported to the division or permitting authority, or plans to monitor a different parameter, or operate the control device in a manner other than that previously reported.
3) Whenever an emission point or CMPU is added to a source, a written addendum to the information in the operating permit application submitted under 40 CFR 63.151(e) containing information on the new emission point shall be submitted.

7. Specific Control Equipment Operating Conditions:

232/5303 Catalytic Incinerator:

a) Pursuant to 40 CFR 63 Subpart G, Section 63.152(c)(2)(ii), the catalytic incinerator shall be operated within the temperature ranges (upstream temperature and temperature difference across the catalyst bed) established in the Notification of Compliance Status to indicate proper operation of the incinerator. For each excursion, except for excused excursions, the permittee shall be deemed to have failed to have applied the control in a manner that achieves the required operating conditions.

b) Pursuant to 40 CFR 63 Subpart G, Section 63.152(c)(2)(ii)(A), an excursion means any of the three cases listed below. If one or more of the temperatures meets the excursion criteria below, this is considered a single excursion for the incinerator.

1) When the daily average value of the temperature upstream of the catalyst bed or daily average value of temperature difference across the catalyst bed is outside the ranges established in the Notification of Compliance Status.
2) When the period of incinerator operation is 4 hours or greater in an operating day and temperature monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.
3) When the period of incinerator operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient temperature monitoring data.
4) Monitoring data are insufficient to constitute a valid hour of data, as used above, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under 40 CFR 63.151(g)(4), monitoring data are insufficient to calculate a valid hour of data if there are less than 4 data values recorded

during the hour.

c) Pursuant to 40 CFR 63 Subpart G, Section 63.152(c)(2)(ii)(B), the number of excused excursions for each semiannual period is as follows, where the first semiannual period is the 6 month period starting the date the Notification of Compliance Status is due:

1) For the first semiannual period - six excused excursions;
2) For the second semiannual period - five excused excursions;
3) For the third semiannual period - four excused excursions;
4) For the fourth semiannual period - three excused excursions;
5) For the fifth semiannual period - two excused excursions; and
6) For the sixth and all subsequent semiannual periods - one excused excursion.

d) Pursuant to 40 CFR 63 Subpart G, Section 63.152(c)(2)(ii)(C), if a monitored temperature is outside its established range or temperature monitoring data is not collected during start-up, shutdown, or malfunction, and the source is operated during such periods in accordance with the source's start-up, shutdown, and malfunction plan as required by 40 CFR 63.6(e)(3), then the temperature monitoring excursion does not count toward the number of excused excursions for determining compliance and is not a violation.

e) Pursuant to 40 CFR 63 Subpart G, Section 63.152(c)(2)(ii)(D), nothing in Sections 7(a) through (c) above shall be construed to allow or excuse a temperature excursion caused by any activity that violates other applicable provisions of 40 CFR 63 Subparts A, F, or G.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: BUTYNEDIOL (B3D) PRODUCTION UNIT

Emission Point(s)	Process ID	Process Description
02 (B3D)	B3D	324 Area Low Pressure B3D Process
		324 Area High Pressure B3D Processes
		324 Area Acetylene Purification Process
		211 Area B3D Purification Process
		211 Area Propargyl Recovery Process

Emission Point(s)	Process ID	Description	Control Equipment
02 (B3D)	B3D	324/3314 Low Pressure B3D Reactor	421/5310 Acetylene Flare

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*
401 KAR 59:005. *General Provisions*
401 KAR 63:015. *Flares*
401 KAR 60:005 (40 CFR 60 Subpart Kb). *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

The source has elected to install and operate a flare to preclude the applicability of 401 KAR 51:017 Prevention of Significant Deterioration of Air Quality.

1. Operating Limitations: None

2. Emission Limitations:

a) ***324/3314 Low Pressure B3D Reactor*:**
To preclude the applicability of 401 KAR 51:017 (PSD) for volatile organic compound (VOC) emissions, VOC emissions from the reactor shall be controlled by the 421/5310 acetylene flare.

Compliance Demonstration Method: Records of daily visual observations to monitor proper operation of the flare. The flare shall be maintained and operated in accordance with Environmental Compliance Task Manual retained at the source. The permittee shall also maintain production records.

b) ***421/5310 Acetylene Flare:***
Pursuant to 401 KAR 63:015, Section 3, the opacity of visible emissions from the flare shall not exceed 20% for more than 3 minutes in any one day, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and
2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: Compliance with the opacity limits shall be demonstrated through the following methods:

The permittee shall perform the monitoring and Record keeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Record keeping Requirements** during all periods that the flare is in operation.

3. Testing Requirements:

421/5310 Acetylene Flare:

The permittee shall perform an EPA Method 9 test on the acetylene flare once every three months during the term of this permit to determe compliance with the opacity limitation contained in 401 KAR 63:015. Opacity shall be determined as an average of 12 consecutive observations recorded at 15-second intervals, rather than the average of 24 consecutive observations recorded at 15-second intervals specified in Section 2.5 of Method 9.

4. Specific Monitoring Requirements:

421/5310 Acetylene Flare:

During days where waste gas is going to the flare, Permittee shall survey the flare and maintain a log noting the following information

a) Weather permitting:
   i. Whether any air emissions were visible from the flare;
   ii. Whether such visible emissions were normal for the flare.

b) If no visible emissions are observed then no further observations are required. If visible emissions are observed, the permittee shall perform one of the following:
   i. The permittee shall perform a Method 9 reading for emission points of concern. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification; or
   ii. The permittee shall observe and record in the daily log the following information:
      (1) The color of the emissions;
      (2) Whether the emissions were light or heavy;
      (3) The total duration of the visible emission incident;
      (4) The cause of the abnormal emissions; and
      (5) Any corrective actions taken.

c) The permittee may cease daily observation and record keeping of daily visual observations upon written approval of the division that the flare is meeting the standards contained in 40 CFR 60.18 (c)-(f). Record shall be maintained as required by 40 CFR 60.18 (c)-(f). In addition, permittee shall install and maintain a thermocouple or any other equivalent device to detect the presence of a flame.

5. Specific Record keeping Requirements:

***324/3314 Low Pressure B3D Reactor*:**

a) The permittee shall retain records of the hours of operation of the reactor and whether emissions from the reactor were vented to the flare during these periods.

421/5310 Acetylene Flare:

b) A log of the visible emissions readings (see 4.a and 4.b) above) whenever there is waste gas flow to the flare.

c) The permittee shall record and retain records of the results of all EPA Method 9 tests performed on the flare.

d) The permittee shall record and retain records of routine and nonroutine maintenance performed on the flare.

e) Upon request and approval of 4(c).Specific Monitoring Requirements, permitee shall record and retain records of the presence of a flare pilot flame.

323/3008 LP B3D 45% Formaldehyde Tank:
333/3005 LP B3D Crude Tank:
321/3029 HP B3D 3rd Stage Storage Tank:
324/3017 5% Formaldehyde Dilution Tank:

f) Pursuant to 40 CFR 60 Subpart Kb, Sections 60.116b(a) and (b), the permittee shall maintain readily accessible records showing the dimensions of each storage tank and an analysis showing the capacity of each tank. The records shall be kept for the life of each tank.

6. Specific Reporting Requirements:

421/5310 Acetylene Flare:

a) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions are or may result in opacity exceeding the standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in 401 KAR 50:055, Section 1(3).

b) Pursuant to 401 KAR 50:045, Section 5, for Method 9 tests required under 401 KAR 50:055, Section 1(3), the permittee shall notify the Division's Paducah Regional office of the intended Method 9 test date at least 10 working days prior to the intended test date.

7. Specific Control Equipment Operating Conditions:

421/5310 Acetylene Flare:

a) The acetylene flare shall be maintained and operated in accordance with the Environmental Compliance Task Manual retained at the source.

b) Upon request and approval of 4(c).Specific Monitoring Requirements, permit shall install, calibrate, operate, and maintain a thermocouple or any other equivalent device to detect the presence of a flare pilot flame.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: BUTANEDIOL (B1D) PRODUCTION UNIT

Emission	Process ID	Process Description
03 (B1D)	B1D	220 Area Low Pressure B1D Crude Process
		215 Area High Pressure B1D Reaction Process
		215 Area High Pressure B1D Purification Process
		215 Area High Pressure B1D Butyl Alcohol Recovery Process

Emission Point(s)	Control Equipment
03 (B1D)	None

APPLICABLE REGULATIONS:

401 KAR 63.002 (40 CFR 63 Subpart F). *National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry.*

1. **Operating Limitations**: None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** Pursuant to 40 CFR 63 Subpart F, Sections 63.100(c) and 63.103(e), the permittee shall record and retain information, data, and analyses used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product any organic hazardous air pollutant listed in Table 2 of Subpart F.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: GAMMA-BUTYROLACTONE (BLO) PRODUCTION UNIT

Emission Point(s)	Process ID	Process Description
04 (BLO)	BLO	224 Area #2 BLO Process
		225 Area #3 BLO Process Recovery Process

Emission Point(s)	Control Equipment
04 (BLO)	None

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart F) *National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry.*

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** Pursuant to 40 CFR 63 Subpart F, Sections 63.100(c) and 63.103(e), the permittee shall record and retain information, data, and analyses used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product any organic hazardous air pollutant listed in Table 2 of Subpart F.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 2-PYRROLIDONE AND SUBSTITUTE PYRROLIDONES PRODUCTION UNIT

Emission Point(s)	Process ID	Process Description
05 (PYR)	PYR	211 Area 2-Pyrrolidone Process
		211 Area Substitute-Pyrrolidones Process
		222 Area 2-Pyrrolidone Process

Emission Point(s)	Control Equipment
05 (PYR)	None

APPLICABLE REGULATIONS: None

1. **Operating Limitations**: None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: VINYL PYRROLIDONE (VP) PRODUCTION UNIT

Emission Point(s)	Process ID	Process Description
06 (VP)	VP	326 Area Vinyl Pyrrolidone Crude Process
		223 Area Vinyl Pyrrolidone Distillation Process
		237 Area High Pressure Vinyl Pyrrolidone Process

Emission Point(s)	Control Equipment
06 (VP)	None

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart F) *National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry.*

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** Pursuant to 40 CFR 63 Subpart F, Sections 63.100(c) and 63.103(e), the permittee shall record and retain information, data, and analyses used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product any organic hazardous air pollutant listed in Table 2 of Subpart F.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: SOLVENT RECOVERY UNIT (SRU)

Emission Point(s)	Process ID	Process Description
07 (SRU)	SRU	231 Area ES-225 Solvent Recovery Process
		231 Area ES-425 Solvent Recovery Process

Emission Point(s)	Process ID	Description	Control Equipment
07 (SRU)	SRU	Process Vents in the 231 Area ES-225 and ES-425 Solvent Recovery Processes (except for emissions from the 330/3002 425 Ethanol Tank)	231/3406 SRU Venturi Scrubber

APPLICABLE REGULATIONS:

401 KAR 50:055. General Compliance Requirements
401 KAR 63:002 (40 CFR 63 Subpart F) *National emission standards for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry.*
(State Origin Requirement) 401 KAR 63:021 *Existing sources emitting toxic air pollutants*

1. **Operating Limitations**: None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements**: None

5. **Specific Recordkeeping Requirements:**

   a) Pursuant to 40 CFR 63 Subpart F, Sections 63.100(c) and 63.103(e), the permittee shall record and retain information, data, and analyses used to determine that the chemical manufacturing process unit does not use as a reactant or manufacture as a product any organic hazardous air pollutant listed in Table 2 of Subpart F.

   (State Origin Recordkeeping Requirement)

   b) The permittee shall maintain onsite and make readily available for inspection by the division the Environmental Compliance Task Manual addressing the Venturi Scrubber.

   c) The permittee shall record and retain records of maintenance performed on the Venturi Scrubber.

   d) The permittee shall record daily, for each day that the SRU process is operating, whether the Venturi Scrubber was operating.

e) Production records and emission estimates for the SRU process.

6. Specific Reporting Requirements: (State Origin Requirement)

a) Pursuant to 401 KAR 50:055, Section 1(2) and with respect to 401 KAR 63:021, the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3) and with respect to 401 KAR 63:021, if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: (State Origin Requirement)

231/3406 SRU Venturi Scrubber: Pursuant to 401 KAR 50:035 Section 1 (7)(b) any control equipment or procedures previously used to achieve compliance with a standard formally contained in 401 KAR 63:021 or 401 KAR 63:022 shall not be removed or altered unless prior approval is obtained from the division. Control equipment may be removed upon approval by the division of calculations that demonstrate that emissions of Toxic Air Pollutants would not have exceeded an ASL level as defined in the former 401 KAR 63:022, Appendix B. Control equipment may also be removed upon the division's approval of results from an approved Air Quality Model, that demonstrates that Maximum ground level concentrations would not have exceed the Threshold Ambient Limits contained in the former 401 KAR 63:022, Appendix B.

Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdowns or malfunctions which temporarily exceed a standard formerly contained in the former 63:021 or 401 KAR 63:022 shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the division makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall maintain records of production in the SRU. During periods of operation where controls were required to comply with or preclude the requirements of the former 401 KAR 63:021 or 401 KAR 63:022, the permittee shall record and maintain records of whether the Venturi Scrubber was operating.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: VINYL ETHERS (VE) PRODUCTION UNIT

Emission Point(s)	Process ID	Process Description
08 (VE)	VE	332 Area Crude Vinyl Ethers Reaction Process
		332 Area Vinyl Ethers Distillation Process
		332 Area Acetylene Purification Process

Emission Point(s)	Control Equipment
08 (VE)	None

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: STAND-ALONE STORAGE TANKS

Emission Point(s)	Process ID	Process Description
09 (TANKS)	313/3004	Methanol Tank

Note: Emission unit consists of storage tanks with throughputs that are not directly tied to the production rate of a product. Tanks with throughputs directly tied to the production rate of a product are included in the section of the permit for the production of that product.

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: WASTEWATER TREATMENT OPERATIONS

Emission Point(s)	Process ID	Process Description
10 (WWT)	WWT	Ditches, basins, activated sludge basins, clarifiers, and ancillary facilities associated with wastewater treatment operations

Emission Point(s)	Control Equipment
10 (WWT)	None

APPLICABLE REGULATIONS: None

1. **Operating Limitations**: None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 240 BUILDING

Emission Point(s)	Process ID	Process Description
11 (240)	240	Train 1 Reaction Process
		Train 2 Reaction Process
		Train 3 Reaction Process
		Train 4 Reaction Process
		Train 1 Drying Process
		Train 2 Drying Process
		Train 3 Drying Process
		DRUM1&2 Packaging System
		DRUM3&4 Packaging System

Emission Point(s)	Process ID	Control Equipment
11 (240)	240	421/5312 Benzene Incinerator
		240/3707 Cyclone
		240/3714 Cyclone

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*.
401 KAR 57:002 (40 CFR 61 Subpart J). *National Emission Standard for Equipment Leaks (Fugitive EmissionSources) of Benzene*.
401 KAR 57:002 (40 CFR 61 Subpart V). *National Emission Standard for Equipment Leaks (Fugitive Emission Source*s.)
401 KAR 57:002 (40 CFR 61 Subpart Y). *National Emission Standard for Benzene Emissions from Benzene Storage Vessels.*
401 KAR 57:002 (40 CFR 61 Subpart FF). *National Emission Standard for Benzene Waste Operations*.
401 KAR 59:005. *General Provisions*.
401 KAR 59:010. *New Process Operations* constructed after July 2, 1975.
401 KAR 61:020. *Existing Process Operations* constructed prior to July 2, 1975.

***Benzene Waste Operations*:** Pursuant to 40 CFR 61 Subpart F, Section 61.342(a), The permittee is exempt from the control requirements of Sections 61.342(b) and (c), since the total annual benzene quantity from facility waste is less than 10 Mg/yr, as determined according to 61.342(a)(1)-(4) and 61.355(a)(1) and (2).

1. Operating Limitations:

242/3001 Recycled Benzene Storage Tank:
242/3002 Recycled Benzene Storage Tank:
242/3005 Virgin Benzene Storage Tank:

a) Pursuant to 40 CFR 61 Subpart Y, Section 61.271(c), the storage tank shall be equipped with a closed-vent system designed to collect all benzene vapors from the storage vessel and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background and visual inspections, as determined in Section 61.242-11 of Subpart V. Benzene vapors collected by the closed-vent system shall be controlled by the 421/5312 Benzene Incinerator.

b) Pursuant to 40 CFR 61 Subpart Y, Section 61.271(c)(3), the specifications and requirements listed in 61.271(c)(1) and (c)(2) for closed vent systems and control devices do not apply during periods of routine maintenance. During periods of routine maintenance, the benzene level in the storage vessels serviced by the control device subject to the provisions of 61.271(c) may be lowered but not raised. Periods of routine maintenance shall not exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). Routine maintenance in excess of 72 hours, but not to exceed 170 hours per year, shall be allowed if during such periods the benzene level in the storage vessels may be lowered but not raised, any emissions are routed to the Vent-Sorb system, and the Vent-Sorb outlet is monitored daily (Method 21) for no detectable emissions. If emissions are detected the carbon in the Vent-Sorb system shall be changed.

c) Pursuant to 40 CFR 61 Subpart A, Section 61.12(c), the permittee shall at all times, including periods of startup, shutdown, and malfunction, maintain and operate the source in a manner consistent with good air pollution control practices for minimizing emissions.

Closed Vent Systems for Capturing Fugitive and Storage Vessel Benzene Emissions:

d) Pursuant to 40 CFR 61 Subpart V Section 61.242-11(f)(1) and Subpart Y Section 61.271(c), the closed-vent system shall be designed to collect all benzene vapors from the storage vessels subject to Subpart Y. The closed-vent system shall be designed for and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background and visual inspections, as determined in Sections 61.242-11 and 61.245(c). Benzene vapors collected by the closed-vent system shall be controlled by the 421/5312 Benzene Incinerator.

e) Pursuant to 40 CFR 61 Subpart Y, Section 61.271(c)(3), the specifications and requirements listed in 61.271(c)(1) and (c)(2) for closed vent systems do not apply during periods of routine maintenance. During periods of routine maintenance, the benzene level in the storage vessels serviced by the closed vent system subject to the provisions of 61.271(c) may be lowered but not raised. Periods of routine maintenance shall not exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). Routine maintenance in excess of 72 hours, but not to exceed 170 hours per year, shall be allowed if during such periods the benzene level in the storage vessels may be lowered but not raised, any emissions are routed to the Vent-Sorb system, and the Vent-Sorb outlet is monitored daily (Method 21) for no detectable emissions. If emissions are detected the carbon in the Vent-Sorb system shall be changed.

f) Pursuant to 40 CFR 61 Subpart V, Section 61.242-11(g), the closed vent system and control device used to comply with Subpart V shall be operated at all times when benzene emissions may be vented to them.

g) Pursuant to 40 CFR 61 Subpart V, Section 61.242-11(f)(3) and (4), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 61.242-10. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Pursuant to 40 CFR 61 Subpart V, Section 61.242-10(a), and (b), delay of repair is allowed if:

1) As specified in 61.242-10(a), the repair is technically infeasible without a process unit shutdown, and repair of this equipment occurs by the end of the next process unit shutdown; or
2) As specified in 61.242-10(b), the equipment is isolated from the process and does not remain in benzene service.

h) Pursuant to 40 CFR 61 Subpart A, Section 61.12(c), the permittee shall at all times, including periods of startup, shutdown, and malfunction, maintain and operate the source in a manner consistent with good air pollution control practices for minimizing emissions.

Fugitive VOC Components in Volatile HAP (Benzene) Service:

i) Pursuant to 40 CFR 61 Subpart V, Section 61.242-1(d), each piece of equipment to which Subpart V applies shall be marked in such a manner that it can be distinguished readily from equipment that is not subject to Subpart V.

j) Pursuant to 40 CFR 61 Subpart A, Section 61.12(c), the permittee shall at all times, including periods of startup, shutdown, and malfunction, maintain and operate the source in a manner consistent with good air pollution control practices for minimizing emissions.

Pumps in Benzene Service:

k) Pursuant to 40 CFR 61 Subpart V, Section 61.242-2(c), when a leak is detected for a pump in benzene service, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 61.242-10. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Pursuant to 40 CFR 61 Subpart V, Section 61.242-10(a), (b), and (d), delay of repair of leaking pumps is allowed if:

1) The repair is technically infeasible without a process unit shutdown, and repair of this equipment occurs by the end of the next process unit shutdown;
2) The equipment is isolated from the process and does not remain in benzene service; or
3) Repair involves the use of a dual mechanical seal system that includes a barrier fluid system, and the repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

l) Pursuant to 40 CFR 61 Subpart V, Section 61.246(b), when each leak is detected as specified in 61.242-2, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after the equipment has been repaired.

m) Pursuant to 40 CFR 61 Subpart V, Section 61.242-2(e), each pump that is designated, as described in 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the requirements of 61.242-2(a), (c), and (d), if the requirements of 61.242-2(e)(1) through (3) are met.

n) Pursuant to 40 CFR 61 Subpart V, Section 61.242-2(f), each pump that is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to the 421/5312 Benzene Incinerator is exempt from the requirements of 61.242-2(a) through (e).

Pressure Relief Devices in Benzene Gas/Vapor Service:

o) Pursuant to 40 CFR 61 Subpart V, Section 61.242-4(a), except during pressure releases, each pressure relief device in benzene gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, as measured by the method specified in 61.245(c).

p) Pursuant to 40 CFR 61 Subpart V, Section 61.242-4(b)(1), after each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except:

1) As specified in 61.242-10(a), the repair is technically infeasible without a process unit shutdown, and repair of this equipment occurs by the end of the next process unit shutdown;

2) As specified in 61.242-10(b), the equipment is isolated from the process and does not remain in benzene service; or
3) As specified in 61.242-4(c), any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to the 421/5312 Benzene Incinerator is exempt from the requirements of 61.242-4(a) and (b).

Sampling Connection Systems in Benzene Service:

q) Pursuant to 40 CFR 61 Subpart V, Section 61.242-5(a), each sampling connection system in benzene service shall be equipped with a closed-purge system or a closed-vent system, except as follows:

In-situ sampling systems and sampling systems without purges are exempt from the requirements of 61.242-5(a) and (b).

r) Pursuant to 40 CFR 61 Subpart V, Section 61.242-5(b), each closed-purge system or closed-vent system shall:
1) Return the purged process fluid directly to the process line with zero benzene emissions to the atmosphere; or

2) Collect and recycle the purged process fluid with zero benzene emissions to the atmosphere; or
3) Be designed and operated to capture and transport all the purged process fluid to the 421/5312 Benzene Incinerator.

Open-Ended Valves or Lines in Benzene Service:

s) Pursuant to 40 CFR 61 Subpart V, Section 61.242-6(a), each open-ended valve or line in benzene service shall be equipped with a cap, blind flange, plug, or a second valve. The cap blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves.

Valves in Benzene Service:

t) Pursuant to 40 CFR 61 Subpart V, Section 61.242-7(d), when a leak is detected for a valve in benzene service, it shall be repaired as soon as practicable, but not later than 10 calendar days after it is detected, except as provided in 61.242-10. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the best practices described in 61.242-7(e). Pursuant to 40 CFR 61 Subpart V, Section 61.242-10(a), (b), (c) and (e), delay of repair of leaking valves is allowed if:

    1) As specified in 61.242-10(a), the repair is technically infeasible without a process unit shutdown, and repair of this equipment occurs by the end of the next process unit shutdown;
    2) As specified in 61.242-10(b), the equipment is isolated from the process and does not remain in benzene service;
    3) As specified in 61.242-10(c), the permittee demonstrates that emission of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and when repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 61.242-11; or
    4) As specified in 61.242-10(c), delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

u) Pursuant to 40 CFR 61 Subpart V, Section 61.246(b), when each leak is detected as specified in 61.242-7, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification on a valve may be removed after it has been monitored for 2 successive months as specified in 61.242-7(c) and no leak has been detected during those 2 months.

Pressure Relief Devices in Liquid Benzene Service, and Flanges and Other Connectors in Benzene Service:

v) Pursuant to 40 CFR 61 Subpart V, Section 61.242-8(c), when a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in 61.242-10. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the best practices described in 61.242-7(e). Pursuant to 40 CFR 61 Subpart V, Section 61.242-10(a), and (b), delay of repair is allowed if:

1) As specified in 61.242-10(a), the repair is technically infeasible without a process unit shutdown, and repair of this equipment occurs by the end of the next process unit shutdown; or
2) As specified in 61.242-10(b), the equipment is isolated from the process and does not remain in benzene service.

w) Pursuant to 40 CFR 61 Subpart V, Section 61.246(b), when each leak is detected as specified in 61.242-8, a weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment. The identification may be removed after the equipment has been repaired.

Product Accumulator Vessels:

x) The following equipment has been determined to be product accumulator vessels, as defined in 40 CFR 61 Subpart V:
240/3224 Strip Tank
240/3253 Strip Tank
240/3202 Receiver
240/3207 Receiver

y) Pursuant to 40 CFR 61 Subpart V, Section 61.242-9, the above product accumulator vessels in benzene service shall be equipped with a closed-vent system capable of capturing and transporting any leakage from the vessel to the 421/5312 Benzene Incinerator.

2. Emission Limitations:

240/DRUM1&2 Packaging System:

a) Pursuant to 401 KAR 61:020, Section 3(2)(a), particulate emissions shall not exceed 9.40 lbs/hr, averaged over a period that covers a complete operation of the batch process, except as follows:

Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdowns or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall retain initial and revised calculations of the particulate emission rate indicating that uncontrolled emissions are less than the 401 KAR 61:020 allowable rate.

b) Pursuant to 401 KAR 61:020, Section 3(1)(a), visible emissions shall not equal or exceed 40% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and
2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdowns or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: During periods of normal operation of the cyclone, no compliance demonstration is necessary.

240/DRUM3&4 Packaging System:

c) Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 7.73 lbs/hr averaged over a period that covers a complete operation of the batch process, except as follows:

Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdowns or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall retain initial and revised calculations of the particulate emission rate less than the 401 KAR 59:010 allowable emission rate.

d) Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and
2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdowns or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: During periods of normal operation of the cyclone, no compliance demonstration is necessary.

421/5312 Benzene Incinerator:

e) Pursuant to 40 CFR 61 Subpart V, Section 61.242-11(c) and Subpart Y, Section 61.271(c)(2), the incinerator shall be designed and operated to reduce inlet benzene emissions by 95 weight percent or greater on a daily average (24-hour operating day) basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdowns or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).
2) Pursuant to 40 CFR 61 Subpart Y, Section 61.271(c)(3), the specifications and requirements listed in 40 CFR 61.271(c)(1) and (c)(2) for closed vent systems and control devices do not apply during periods of routine maintenance. During periods of routine maintenance, the benzene level in the storage vessels serviced by the control device subject to the provisions of 40 CFR 61.271(c) may be lowered but not raised. Periods of routine maintenance shall not exceed 72 hours as outlined in the maintenance plan required by 40 CFR 61.272(c)(1)(iii). Routine maintenance in excess of 72 hours, but not to exceed 170 hours per year, shall be allowed if during such periods the benzene level in the storage vessels may be lowered but not raised, any emissions are routed to the Vent-Sorb system, and the Vent-Sorb outlet is monitored daily (Method 22) for no detectable emissions. If emissions are detected the carbon in the Vent-Sorb system shall be changed.

3. Testing Requirements:

421/5312 Benzene Incinerator:

Pursuant to 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted once during the permit term.

Fugitive VOC Components in Volatile HAP (Benzene) Service:

Within six months of final permit issuance, permittee shall submit to the Paducah field office, a “Leak Detection“ protocol which, at a minimum, shall include:

a. Description of portable instrument(s) used
b. Calibration gas(es) used.
c. Instrument response time.
d. Response time and response factor.

4. Specific Monitoring Requirements:

421/5312 Benzene Incinerator:

a) Pursuant to operations plan submitted pursuant to 40 CFR 61 Subpart V, Section 61.242-11(e), the permittee shall continuously monitor the incinerator combustion temperature. Temperatures shall be recorded at least once every minute, except during periods of

monitoring system calibration checks and periods when the monitoring system is malfunctioning or inoperative.

Closed Vent Systems for Capturing Fugitive and Storage Vessel Benzene Emissions:

b) Pursuant to 40 CFR 61 Subpart V, Sections 61.242-11(f)(2) and (f)(3), the closed vent systems shall be monitored to determine compliance with Section 61.242-11 initially in accordance with 61.105, annually, and at other times requested by the Director. If an instrument reading of 500 ppmv or greater is measured, or a visual inspection indicates evidence of a leak, a leak is detected.

Vent-Sorb System:

c) During periods of routine maintenance when benzene storage vessel emissions are vented to the Vent-Sorb system, emissions from the outlet of the system shall be monitored at least once per day using Method 21. If an instrument reading of 550 ppmv or greater is measured, then the carbon drum shall be changed.

Pumps in Benzene Service:

d) Pursuant to 40 CFR 61 Subpart V, Sections 61.242-2(a)(1) and (b)(1), each pump shall be monitored monthly to detect leaks by the method specified in Section 61.245(b), except as provided in Section 61.242-2(d), (e), and (f). If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected.

e) Pursuant to 40 CFR 61 Subpart V, Sections 61.242-2(a)(2) and (b)(2), each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected.

f) Pursuant to 40 CFR 61 Subpart V, Section 61.242-2(d), each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of Sections 61.242-2(a) and (b), provided that the operating and monitoring requirements of Section 61.242-2(d)(1) through (6) are met.

g) Pursuant to 40 CFR 61 Subpart V, Section 61.242-2(e), each pump that is designated, as described in Section 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the requirements of Section 61.242-2(a), (c), and (d), if the requirements of Section 61.242-2(e)(1) through (3) are met.

h) Pursuant to 40 CFR 61 Subpart V, Section 61.242-2(f), each pump that is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to the 421/5312 Benzene Incinerator is exempt from the requirements of Section 61.242-2(a) through (e).

Pressure Relief Devices in Benzene Gas/Vapor Service:

i) Pursuant to 40 CFR 61 Subpart V, Section 61.242-4(b)(2), no later than 5 calendar days after each pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, as measured by the method specified in Section 61.245(c).

Valves in Benzene Service:

j) Pursuant to 40 CFR 61 Subpart V, Section 61.242-7(a) and (b), and except as provided below and in Section 61.242-7(f), (g), (h), 61.243-1, or 61.242-2, each valve in benzene service shall be monitored monthly to detect leaks using the method specified in Section 61.245(b). If an instrument rating of 10,000 ppmv or greater is measured, a leak is detected.

Pursuant to 40 CFR 61 Subpart V, Section 61.242-7(c), any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected. If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

k) Pursuant to 40 CFR 61 Subpart V, Section 61.242-7(f), any valve that is designated, as described in 61.246(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background, is exempt from the monthly monitoring required by Section 61.242-7(a) if the valve:

1) Has no external actuating mechanism in contact with the process fluid;
2) Is operated with emissions less than 500 ppmv above background, as measured by the method specified in Section 61.245(c); and
3) Is tested for compliance with the 500 ppmv standard initially upon designation, annually, and at other times requested by the Director.

l) Pursuant to 40 CFR 61 Subpart V, Section 61.242-7(h), any valve that is designated, as described in Section 61.246(f)(2), as a difficult to monitor valve, is exempt from the monthly monitoring required by Section 61.242-7(a) if:

1) The owner or operator demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface;
2) The process unit within which the valve is located is an existing process unit; and
3) The owner or operator follows a written plan that requires monitoring of the valve at least once per calendar year.

m) Pursuant to 40 CFR 61 Subpart V, Section 61.243-1, the permittee may elect to have all valves within the process unit comply with an allowable percentage of valves leaking of equal or less than 2.0 percent. If the owner or operator decides to comply with this alternative, the owner or operator must notify the Director before implementing this alternative standard, and must comply with the requirements specified in Section 61.243-1.

n) Pursuant to 40 CFR 61 Subpart V, Section 61.243-2, the permittee may elect to have all valves within the process unit comply with one of the alternative work practices specified in 61.243-2(b)(2) and (3). If the owner or operator decides to comply with one of these alternatives, the owner or operator must notify the Director before implementing this alternative standard, and must comply with the requirements specified in 61.243-2.

Pressure Relief Devices in Liquid Benzene Service, and Flanges and Other Connectors in Benzene Service:

o) Pursuant to 40 CFR 61 Subpart V, Sections 61.242-8(a) and (b), pressure relief devices in liquid benzene service, and flanges and other connectors in benzene service shall be monitored within 5 days by the method specified in Section 61.245(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. If an instrument reading of 10,000 ppmv or greater is measured, a leak is detected.

5. Specific Recordkeeping Requirements:

Benzene Waste Operations:

a) Pursuant to 40 CFR 61 Subpart FF, Sections 61.355(a)(1) and (2), the permittee shall calculate and record the total annual benzene quantity from facility waste using the methods specified in Section 61.355(a)(1), (a)(2), (b), and (c). Calculation must be performed at least once each year and whenever there is a process change that could cause the quantity to increase to greater than or equal to 10 Mg/yr.

b) Pursuant to 40 CFR 61 Subpart FF, Section 61.356(b), the permittee shall maintain records that identify each waste stream at the facility subject to Subpart FF, and indicate whether or not the waste stream is controlled for benzene emissions.

c) Pursuant to 40 CFR 61 Subpart FF, Section 61.356(b)(1), for each waste stream not controlled for benzene the permittee shall keep records of test results, measurements, and calculations used to determine the waste stream properties specified in Section 61.356(b)(1) (data used to determine total annual benzene quantity from benzene waste).

d) Pursuant to 40 CFR 61 Subpart FF, Section 61.356(b)(5), for each facility where the annual waste quantity for process unit turnaround waste is determined according to 40 CFR 63.155(b)(4), the permittee shall keep records of process unit turnaround waste specified in 40 CFR 63.156(b)(5).

e) Pursuant to 40 CFR 61 Subpart FF, Section 61.356(a), the permittee shall retain records required by 40 CFR 61.356 in a readily accessible location at the facility site for a period of at least five years from the date of the record.

240/DRUM1&2 Packaging System:

f) The permittee shall retain initial permit calculations or test results indicating that uncontrolled particulate emissions are less than the 401 KAR 61:020 allowable emission rate.

240/DRUM3&4 Packaging System:

g) The permittee shall retain initial permit calculations or test results indicating that uncontrolled particulate emissions are less than the 401 KAR 59:010 allowable emission rate.

h) Pursuant to 401 KAR 59:005, Section 3(2), the permittee shall record and retain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the packaging systems.

242/3001 Recycled Benzene Storage Tank:
242/3002 Recycled Benzene Storage Tank:
242/3005 Virgin Benzene Storage Tank:

i) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(b), the permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel is in operation.

j) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(c)(3)(i)(C), the permittee shall maintain a continuous record of the liquid level in the storage vessel during all times that the closed vent system and control device does not meet the specifications of Section 61.271(c) due to maintenance. Pumping records (simultaneous input and output) may be substituted for records of the liquid level.

k) During periods when emissions are vented to the Vent-Sorb system, the permittee shall maintain a record of the daily Method 21 monitoring results at the Vent-Sorb system outlet.

l) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(a), the permittee shall keep copies of all reports and records required by Subpart Y for at least five years, with the exception of records of tank dimension and capacity, which must be kept for as long as the tank is operating.

421/5312 Benzene Incinerator:

m) Pursuant to 40 CFR 61 Subpart A, Section 61.14(f), the permittee shall record and retain the following records for the incinerator temperature monitoring system:
   1) The permittee shall record the incinerator combustion temperature.
   2) The permittee shall maintain records of temperature monitoring system calibration checks.

3) The permittee shall maintain records of the occurrence and duration of any period during which the monitoring system is malfunctioning or inoperative.

n) In order to demonstrate compliance with 40 CFR 61 Subpart V, Section 61.242-11(c) and Subpart Y, Section 61.271(c)(2), if the combustion temperature falls below 1390° F for 15 minutes or longer, the permittee shall calculate and retain records of the weight percent benzene reduction for the 24-hour operating day period inclusive of the incident. Pursuant to 40 CFR 61 Subpart A, Section 61.14(e), monitoring data recorded during periods of unavoidable monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in any data average.

o) Pursuant to 40 CFR 61 Subpart V, Section 61.246(d)(4), the permittee shall record periods when the closed-vent system and incinerator are not operated as designed and retain records in a readily accessible location.

p) Pursuant to 40 CFR 61 Subpart V, Sections 61.246(d)(1) and (2), the permittee shall record and keep in a readily accessible location detailed schematics, design specifications, piping and instrument diagrams, and dates and descriptions of any changes in the design specifications for the incinerator.

q) Pursuant to 40 CFR 61 Subpart V, Section 61.246(d)(3), the permittee shall record and keep in a readily accessible location a description of the parameters monitored, as required by 61.242-11(e), and an explanation of why the parameters were selected for monitoring.

r) Pursuant to 40 CFR 61 Subpart V, Section 61.246(d)(5), the permittee shall record and keep in a readily accessible location the dates of startups and shutdowns of the closed-vent system and incinerator.

s) Pursuant to 401 KAR 50:035 and 40 CFR 61 Subpart A, Section 61.13(c), the permittee shall maintain at the source for at least five years, and make available upon request to the division, records of emission test results and other data needed to determine emissions.

t) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(c)(1), a copy of the Operating Plan required by Section 61.272(c)(1) shall be kept in a readily accessible location for as long as the closed vent system and incinerator are in use. The Operating Plan shall include the information specified in Section 61.272(c)(1), including: documentation demonstrating that the incinerator achieves the required control efficiency; a description of the parameter or parameters to be monitored to ensure that the incinerator is operated and maintained in conformance with its design and an explanation of the criteria used for selection of that parameter; and a maintenance plan for the system. As specified by Section 61.272(c)(1)(iii), the maintenance plan shall require that the system be out of compliance with Section 61.271(c) for no more than 72 hours per year. Bypass of the incinerator for periods of routine maintenance in excess of 72 hours, but not to exceed 170 hours per year, shall be allowed if during such periods the benzene level in the storage vessels may be lowered but not raised, any emissions are routed to the Vent-Sorb system, and the Vent-Sorb outlet is monitored daily (Method 21) for no detectable emissions. If emissions are detected the carbon in the Vent-Sorb system shall be changed.

u) Pursuant to Agreed Orders DAQ-19704-106 and DAQ-2165-037, the Operating Plan described above must include an education and training program for employees which explains and insures that the proper maintenance and operating procedures are followed for the incinerator.

v) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(a), the permittee shall maintain copies of all reports and records required by Subpart Y for at least five years, with the exception of the Operating Plan, which must be kept for as long as the control device is operating.

w) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(c)(2), the permittee shall maintain records of measured values of the monitored parameters specified in the operating plan required by Section 61.272(c) for at least five years.

x) Pursuant to 40 CFR 61 Subpart Y, Section 61.276(c)(3)(i)(A) and (B), the permittee shall maintain records of maintenance performed in accordance with the maintenance plan required by Section 61.272(c) for at least five years. Records shall include the beginning and ending times and dates of periods when control requirements of 61.271(c) were not met due to maintenance.

Closed Vent Systems for Capturing Fugitive and Storage Vessel Benzene Emissions:

y) Pursuant to 40 CFR 61 Subpart V, Section 61.246(d)(4), the permittee shall record periods when the closed-vent system is not operated as designed and retain such records in a readily accessible location.

z) Pursuant to 40 CFR 61 Subpart V, Sections 61.246(d)(1) and (2), the permittee shall record and keep in a readily accessible location detailed schematics, design specifications, piping and instrument diagrams, and dates and descriptions of any changes in the design specifications for the closed vent system.

aa) Pursuant to 40 CFR 61 Subpart V, Section 61.246(d)(5), the permittee shall record and keep in a readily accessible location the dates of startups and shutdowns of the closed-vent system and incinerator.

Fugitive VOC Components Not in Volatile HAP (Benzene) Service:

bb) Pursuant to 40 CFR 61 Subpart V, Sections 61.246(i)(2) and (j), for equipment (as defined in Subpart F) in the 240 Building that is not in benzene service, an analysis demonstrating that such equipment is not in benzene service shall be recorded in a log that is kept in a readily accessible location. The record shall include information and data used to demonstrate that the equipment is not in benzene service.

Fugitive VOC Components in Volatile HAP (Benzene) Service:

cc) Pursuant to 40 CFR 61 Subpart V, Section 61.246, the following records and information shall be recorded in a log that is kept in a readily accessible location:

1) As required by Section 61.246(e)(1), a list of identification numbers of equipment (except welded fittings) subject to Subpart V.
2) As required by Section 61.246(e)(2), a list of identification numbers of equipment that the permittee elects to designate for no detectable emissions, as indicated by an instrument reading less than 500 ppmv above background. The designation of this equipment as no detectable emissions must be signed by the owner or operator.
3) As required by Section 61.246(e)(5), a list of identification numbers of equipment in vacuum service.
4) As required by Section 61.246(e)(4), for equipment in benzene service designated as no detectable emissions, records of the dates, background level, and maximum instrument reading measured during each compliance test.
5) As required by Section 61.246(h), for pumps in benzene service, records of design criteria for each dual mechanical seal system used for compliance in accordance with Section 61.242-2(d), an explanation of the design criteria, and any changes to these criteria and the reasons for the changes.
6) As required by Section 61.246(e)(3), a list of identification numbers for pressure relief devices in benzene gas/vapor subject to the requirements of Section 61.242-4(a).
7) As required by Section 61.246(e)(4), for pressure relief devices in benzene gas/vapor service, records of the dates, background level, and maximum instrument reading measured during each compliance test.
8) As required by Section 61.246(f)(2), for valves in benzene service designated as difficult to monitor under Section 61.242-7(h): a list of identification numbers for valves designated as difficult to monitor; an explanation of why the valve is difficult to monitor; and the planned schedule for monitoring each difficult to monitor valve.
9) As required by Section 61.246(g), for all valves complying with Section 61.242-2 (skip period leak detection and repair), records of the monitoring schedule and the percent of valves found leaking during each monitoring period.
10) As required by Section 61.246(c), when each leak is detected as specified in Section 61.242-2, 61.242-3, 61.242-7, 61.242-8, and 61.135, the following information shall be recorded and retained for five years:
    i) The instrument and operators' identification numbers and equipment identification number.
    ii) The date the leak was detected and the dates of each attempt to repair the leak.
    iii) Repair methods applied in each attempt to repair the leak.
    iv) "Above 10,000" if the maximum instrument reading measured by the methods specified in Section 61.245(a) after each repair attempt is equal to or greater than 10,000 ppmv.
    v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
    vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
    vii) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.
    viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
    ix) The date of successful repair of the leak.

6. Specific Reporting Requirements:

Benzene Waste Operations:

a) Pursuant to 40 CFR 61 Subpart FF, Section 61.357(c), the permittee shall submit an annual report updating the information specified in Section 61.357(a)(1) - (3). Report shall be submitted with the Annual Compliance Certification (Form DEP7007CC) to the Paducah Regional Office. If information is not changed from the previous year, a statement to that effect may be submitted.

b) Pursuant to 40 CFR 61 Subpart FF, Section 61.357(c), the permittee shall submit a report updating the information specified in Section 61.357(a)(1) - (3) whenever there is a change in the process generating the waste that could cause the total annual benzene quantity from facility waste to increase to 10 Mg/yr or greater.

240/DRUM1&2 Packaging System:

c) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

d) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

240/DRUM3&4 Packaging System:

e) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

f) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a

written notice if so requested. Such written notice shall include all information specified in Section 1(3).

g) Pursuant to 401 KAR 59:005, Section 3(1)(d), the Paducah Regional Office shall be notified of any modifications (as defined in 401 KAR 59:001) to this facility. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Cabinet may request additional relevant information subsequent to this notice.

421/5312 Benzene Incinerator:

h) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in emissions exceeding the daily average standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

i) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in emissions exceeding the daily average standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

j) Pursuant to 40 CFR 61 Subpart Y, Section 61.275(e), the permittee shall submit Quarterly Excess Emission and Excursion Reports to the Division's Paducah Regional office for each calendar quarter. Reports shall identify each occurrence that results in excess emissions or excursion. Excess emissions are emissions that occur at any time when compliance with the specifications and requirements of Section 61.271(c) are not achieved, as evidenced by the monitored incinerator combustion temperature, as specified below.

1) If the monitored incinerator combustion temperature is greater than or equal to 1390° F, the incinerator is evidenced to be achieving the required destruction efficiency.
2) When the monitored incinerator combustion temperature drops below 1390 F for 15 minutes or longer, the permittee shall prepare a mathematical demonstration to determine the daily average weight percent benzene reduction for the 24-hour operating day inclusive of the incident. Pursuant to 40 CFR 61 Subpart A, Section 61.14(e), monitoring data recorded during periods of unavoidable monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in any data average. If the calculated operating day average benzene destruction efficiency is greater than or equal to 95 weight percent, the incinerator has been in compliance for the period in question. If the calculated daily average benzene destruction efficiency is less than 95 weight percent, excess emissions have occurred.

The demonstration shall use the following destruction efficiencies:

Combustion Temperature (Deg. F)	T range (minutes)	Benzene Destruction Efficiency (%)
≥1500	T1	100
1400 ≥ T < 1500	T2	97
1390 ≥ T < 1400	T3	95
< 1390	T4	0

Control efficiency = (100 x ∑T1 +97 x ∑T2 + 95 x ∑T3) / (T1+T2+T3)

n) Pursuant to 40 CFR 61 Subpart Y, Section 61.275(e)(2) and (3), Quarterly Excess Emission and Excursion Reports shall as a minimum contain the following:

1) Identification of the stack and other emission points where the excess emissions occurred;
2) A statement of whether or not the owner or operator believes a control system malfunction has occurred;
3) If the owner or operator states that a control system malfunction has occurred, the following information as a minimum is also to be included:
   i) Time and duration of the control system malfunction as determined by continuous monitoring data, or the inspection or monitoring done in accordance with the Operating Plan required by Section 61.271(c).
   ii) Cause of excess emissions.
4) All periods of excursion, an excursion is defined as any period of 15 minutes or longer where the combustion temperature is less than 1390° F.

Fugitive VOC Components in Volatile HAP (Benzene) Service:

o) Pursuant to 40 CFR 61 Subpart V, Section 61.247(b), the permittee shall submit semiannual reports to the Paducah Regional Office by July 28 and January 28 of each year. The permittee may shift to reporting to coincide with the complicance certification described in **General Condition F.5** upon approval of the regional office. The semiannual reports must contain the following information:

1) Process unit identification.
2) For each month during the semiannual reporting period:
   i) The number of valves for which leaks were detected as described in Section 61.242-7(b) and Section 61.243-2.
   ii) The number of valves for which leaks were not repaired as required in Section 61.242-7(d).

iii) The number of pumps for which leaks were detected as described in Section 61.242-2(b) and (d)(6).

iv) The number of pumps for which leaks were not repaired as required in Section 61.242-2(c) and (d)(6).

vii) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

4) Revisions to items reported in the initial report required by 40 CFR61.247(a) if changes have occurred since the initial report or subsequent revisions to the initial report.

5) The results of all performance tests and monitoring to determine compliance with no detectable emissions and with 40 CFR61.243-1 and 40 CFR61.243-2 conducted within the semiannual reporting period.

7. Specific Control Equipment Operating Conditions:

421/5312 Benzene Incinerator:

a) Pursuant to 40 CFR 61 Subpart V, Section 61.242-11(g), the closed vent system and control device used to comply with Subpart V shall be operated at all times when emissions may be vented to them.

b) Pursuant to 40 CFR 61 Subpart Y, Section 61.272(c)(2), the permittee must operate, monitor, and maintain the closed vent system and incinerator in accordance with the operating plan submitted under Section 61.272(c)(1).

c) Pursuant to 40 CFR 61 Subpart A, Section 61.12(c), the permittee shall at all times, including periods of startup, shutdown, and malfunction, maintain and operate the incinerator in a manner consistent with good air pollution control practices for minimizing emissions.

d) Pursuant to 40 CFR 61 Subpart A, Section 61.14(b), the permittee shall maintain and operate the incinerator temperature monitoring system as specified in Subparts V and Y, and in a manner consistent with good air pollution control practices for minimizing emissions. Any unavoidable breakdowns or malfunctions of the temperature monitoring system shall be repaired or adjusted as soon as practicable after its occurrence.

e) Pursuant to 40 CFR 61 Subpart V, Section 61.242-11(c) and Subpart Y, Section 61.271(c)(2), the incinerator shall be designed and operated to reduce inlet benzene emissions by 95 weight percent or greater on a daily average basis.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 236 BUILDING

Emission Point(s)	Process ID	Process Description
12 (236)	236	Batch Production Processes

Emission Point(s)	Process ID	Control Equipment
12 (236)	236	236/3402 Scrubber (State Requirement)
		236/5375 Scrubber (State Requirement)
		236/5306 Scrubber
		236/5336 Scrubber
		Gateway Thermal Oxidizer (common with Gateway Facility)
		421/5312 Benzene Incinerator (common with 240 Building)

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*.
401 KAR 61:020. E*xisting Process Operations* constructed prior to July 2, 1975.
401 KAR 59:005. *General Provisions*.
401 KAR 59:010. *New Process Operations* constructed after July 2, 1975.
401 KAR 60:005 (40 CFR 60 Subpart Kb) *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.*
(State Origin Requirement) 401 KAR 63:021. *Existing sources emitting toxic air pollutants*.

1. Operating Limitations: None

2. Emission Limitations:

236/3701 Cyclone for Dryer 236/3501 (controlled by Scrubber 236/5306):

a) Pursuant to 401 KAR 61:020, Section 3(2)(a), particulate emissions shall not exceed 2.58 lbs/hr, averaged over a period that covers a complete operation of the batch process, except as follows:
Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall retain initial permit calculations or test results that indicating that uncontrolled particulate emissions are less than the 401 KAR 61:020 allowable emission rate.

b) Pursuant to 401 KAR 61:020, Section 3(1)(a), visible emissions shall not equal or exceed 40% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and
2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method:
1) During normal operation of the emission unit no compliance demonstration is necessary.
2) If the emission unit is in operation during any period of malfunction of the scrubber, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

236/3708 Cyclone for Dryer 236/3503 (controlled by Scrubber 236/5336):

c) Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.34 lbs/hr, averaged over a period that covers a complete operation of the batch process, except as follows:
Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall retain initial permit calculations or test results indicating that uncontrolled particulate emissions are less than the 401 KAR 59:010 allowable emission rate.

d) Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and

2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method:

1) During normal operation of unit no compliance demonstration is necessary.
2) If the emission unit is in operation during any period of malfunction of the scrubber, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

236/3701 Cyclone for Dryer 236/3501:

a) The permittee shall retain initial permit calculations or test results indicating that uncontrolled particulate emissions are less than the 401 KAR 61:020 allowable emission rate.

236/3708 Cyclone for Dryer 236/3503:

b) The permittee shall retain initial permit calculations or test results indicating that uncontrolled particulate emissions are less than the 401 KAR 59:010 allowable emission rate.

c) Pursuant to 401 KAR 59:005, Section 3(2), the permittee shall record and retain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the scrubber.

Both:

d) During all periods of malfunction of any of the scrubbers, if any of the emission units are operating , a log with records every four (4) hours of the following information shall be kept:
   i Results from a Reference Method 9 observation, **OR**;
   ii. Whether any air emissions were visible.

   If visible emissions are observed, the permittee shall record the following information:
   iii. Whether the visible emissions were normal for the process.
   iv. The color of the emissions and whether the emissions were light or heavy.
   v. The cause of the abnormal visible emissions.
   vi. Any corrective actions taken.

e. All maintenance activities performed at the scrubbers.

236/3006 Gantrez Dryer Feed Tank:

f) Pursuant to 40 CFR 60 Subpart Kb, Sections 60.116b(a) and (b), the permittee shall maintain readily accessible records showing the dimensions of the storage tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank.

(State Origin Requirements)
236/3402 Scrubber:
236/5375 Scrubber:
421/5312 Benzene Incinerator:
Gateway Thermal Oxidizer:

g) The permittee shall maintain onsite and make readily available for inspection the Environmental Compliance Task Manuals addressing each air pollution control device listed above.

h) The permittee shall record and retain records of maintenance performed on each air pollution control device listed above.

i) The permittee shall record daily, for each day that the process is operating, whether each of the air pollution control devices listed above was operating, routine and nonroutine maintenance, duration and cause of any shut-downs.

j) Production records and emission estimate for each product controlled by the air pollution control devices listed above.

6. Specific Reporting Requirements:

236/3701 Cyclone for Dryer 236/3501:

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

236/3708 Cyclone for Dryer 236/3503:

c) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

d) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

e) Pursuant to 401 KAR 59:005, Section 3(1)(d), the Paducah Regional Office shall be notified of any modification (as defined in 401 KAR 59:001) to this affected facility. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Cabinet may request additional relevant information subsequent to this notice.

(State Origin Requirements)

f) Pursuant to 401 KAR 50:055, Section 1(2) and with respect to 401 KAR 63:021, the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

g) Pursuant to 401 KAR 50:055, Section 1(3) and with respect to 401 KAR 63:021, if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: (State Origin Requirements)
236/3402 Scrubber:
236/5375 Scrubber:
421/5312 Benzene Incinerator:
Gateway Thermal Oxidizer:

Pursuant to 401 KAR 50:035 Section 1 (7)(b) any control equipment or procedures previously used to achieve compliance with a standard formally contained in 401 KAR 63:021 or 401 KAR 63:022 shall not be removed or altered unless prior approval is obtained from the division. Control equipment may be removed upon approval by the division of calculations that demonstrate that emissions of Toxic Air Pollutants would not have exceeded an ASL level as defined in the former 401 KAR 63:022, Appendix B. Control equipment may also be removed upon the division's approval of results from an approved Air Quality Model, that demonstrates that Maximum ground level concentrations would not have exceed the Threshold Ambient Limits contained in the former 401 KAR 63:022, Appendix B.

Compliance Demonstration Method: The permittee shall maintain records of batch production in the 236 Building. During periods of operation where the controls were required to comply with or preclude the requirements of the former 401 KAR 63:021 or 401 KAR 63:022, the permittee shall record and maintain records of the operation, routine and nonroutine maintenance and the duration and cause of any shut-downs each of the scrubbers listed above. The operation and maintenance of the 421/5312 Benzene Incinerator and Gateway Thermal Oxidizer are described elsewhere in this permit.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 315 BUILDING

Emission Point(s)	Process ID	Process Description
13 (315)	315	Batch Production Processes

Emission Point(s)	Process ID	Control Equipment
13 (315)	315	421/5311 Toluene Incinerator

APPLICABLE REGULATIONS:
(State Origin Requirement) 401 KAR 63:021. *Existing sources emitting toxic air pollutants.*

1. **Operating Limitations**: None

2. **Emission Limitations**: None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements**: None

5. **Specific Recordkeeping Requirements: (State Origin Requirements)**

a) The permittee shall maintain onsite and make readily available for inspection the Environmental Compliance Task Manual addressing the Toluene Incinerator.

b) The permittee shall record and retain records of routine and nonroutine maintenance performed on the Toluene Incinerator.

c) The permittee shall log daily, for each day that the 315 Building processes are in operation, whether the Toluene Incinerator was operating.

d) Production records and emission estimates for each product controlled by the Toluene Incinerator.

6. **Specific Reporting Requirements: (State Origin Requirements)**

a) Pursuant to 401 KAR 50:055, Section 1(2) and with respect to 401 KAR 63:021, the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3) and with respect to 401 KAR 63:021, if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: (State Origin Requirements)

421/5311 Toluene Incinerator : Pursuant to 401 KAR 50:035 Section 1 (7)(b) any control equipment or procedures previously used to achieve compliance with a standard formally contained in 401 KAR 63:021 or 401 KAR 63:022 shall not be removed or altered unless prior approval is obtained from the division. Control equipment may be removed upon approval by the division of calculations that demonstrate that emissions of Toxic Air Pollutants would not have exceeded an ASL level as defined in the former 401 KAR 63:022, Appendix B. Control equipment may also be removed upon the division's approval of results from an approved Air Quality Model, that demonstrates that Maximum ground level concentrations would not have exceed the Threshold Ambient Limits contained in the former 401 KAR 63:022, Appendix B

Compliance Demonstration Method: The permittee shall maintain records of batch production in the 315 Building. During periods of operation where controls were required to comply with or preclude the requirements of the former 401 KAR 63:021 or 401 KAR 63:022, the permittee shall record and maintain records of whether the 421/5311 Toluene Incinerator was operating.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 200 BUILDING

Emission Point(s)	Process ID	Process Description
14 (200)	200	Batch Production Processes

Emission Point(s)	Process ID	Control Equipment
14 (200)	200	200/3641 Steam Spray Dryer Baghouse
		200/5369 Gas Spray Dryer Venturi Scrubber

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*
401 KAR 59:005. *General Provisions*
401 KAR 59:010. *New Process Operations* constructed after July 2, 1975.

1. Operating Limitations: None

2. Emission Limitations:

Cyclones 200/3701, 200/3702, and 200/3717
(Central Vacuum System for Steam Spray Dryer 200/3501):

a) Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.34 lbs/hr averaged over a period that covers a complete operation of the batch process, except as follows:

Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The baghouse shall control particulate emissions and be operated in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions units listed above are in operation.

b) Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and

2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The baghouse shall control particulate emissions and be operated in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions units listed above are in operation.

Cyclones 200/3705, 200/3712, and 200/3718
(Central Vacuum System for Gas Spray Dryer 200/3502):

c) Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.59 lbs/hr averaged over a period that covers a complete operation of the batch process, except as follows:

Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The scrubber shall control particulate emissions and be operated in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions units listed above are in operation.

d) Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and
2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdown or malfunctions which temporarily exceed the standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The scrubber shall control particulate emissions and be operated in accordance with manufacturer's specifications and/or standard operating procedures at all times any of the emissions units listed above are in operation.

3. Testing Requirements:
Cyclones 200/3701, 200/3702, and 200/3717
(Central Vacuum System for Steam Spray Dryer 200/3501):

Cyclones 200/3705, 200/3712, and 200/3718
(Central Vacuum System for Gas Spray Dryer 200/3502):

An EPA Method 9 test shall be conducted on the control devices controlling the cyclones at least once every three months during the term of this permit.

4. Specific Monitoring Requirements:

Baghouse 200/3641: For purposes of demonstrating continuing compliance with the opacity and particulate emission limits contained in 401 KAR 59:010, the permittee shall monitor and maintain daily records of the pressure drop across the baghouse.

Venturi Scrubber 200/5369: For purposes of demonstrating continuing compliance with the opacity and particulate emission limits contained in 401 KAR 59:010, the permittee shall monitor and maintain daily records of the water pressure drop across the scrubber.

5. Specific Recordkeeping Requirements:

Cyclones 200/3701, 200/3702, and 200/3717
(Central Vacuum System for Steam Spray Dryer 200/3501)

a) The permittee shall retain initial and revised calculations of the particulate emission rate.

b) The permittee shall record and retain records of the results of all EPA Method 9 tests performed.

c) Pursuant to 401 KAR 59:005, Section 3(2), the permittee shall record and retain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process or air pollution control equipment.

Cyclones 200/3705, 200/3712, and 200/3718
(Central Vacuum System for Gas Spray Dryer 200/3502):

d) The permittee shall retain initial and revised calculations of the particulate emission rate.

e) The permittee shall record and retain records of the results of all EPA Method 9 tests performed.

f) The permittee shall maintain the following records at the plant:
   1) Pressure drop across the venturi scrubber;
   2) All routine and non-routine maintenance activities;
   3) For all periods when records for pressure drop are unavailable, permittee shall document the duration and cause of instrument outages (i.e. calibration, maintenance, malfunction).
   4) Pressure measurements shall be accurate within + or - 5%.

g) Pursuant to 401 KAR 59:005, Section 3(2), the permittee shall record and retain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process or air pollution control equipment.

6. Specific Reporting Requirements:

Cyclones 200/3701, 200/3702, and 200/3717
(Central Vacuum System for Steam Spray Dryer 200/3501):

Cyclones 200/3705, 200/3712, and 200/3718
(Central Vacuum System for Gas Spray Dryer 200/3502):

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard or particulate emissions exceeding standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

c) Pursuant to 401 KAR 59:005, Section 3(1)(d), the Paducah Regional Office shall be notified of any modification (as defined in 401 KAR 59:001) to this affected facility. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Cabinet may request additional relevant information subsequent to this notice.

7. Specific Control Equipment Operating Conditions:
Baghouse 200/3641:
Venturi Scrubber 200/5369:

a) The pollution control devices listed above shall be maintained and operated in accordance with good operating procedures as described by the Environmental Compliance Task Manual retained at the source.

b) The permittee shall retain the Environmental Compliance Task Manuals addressing the air pollution control devices listed above.

c) The permittee shall record and retain records of maintenance performed on the air pollution control devices listed above.

d) The scrubber shall operate at a minimum of 4 inches water pressure drop (three hour rolling average).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 334 BUILDING

Emission Point(s)	Process ID	Process Description
15 (334)	334	PVP-Iodine Production Process

Emission Point(s)	Process ID	Control Equipment
15 (334)	334	334/3231 PVP-I Scrubber
		334/3716 PVP-I Cyclone

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*
401 KAR 59:005. *General Provisions*
401 KAR 59:010. *New Process Operations constructed* after July 2, 1975.
401 KAR 63:021 *Existing sources emitting toxic air pollutants.*

1. Operating Limitations: None

2. Emission Limitations:

334/3717 Ribbon Blender
(Controlled by 334/3716 Cyclone and 334/3231 Scrubber):

a) Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions shall not exceed 2.34 lbs/hr averaged over a period that covers a complete operation of the batch process, except as follows:

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

*Compliance Demonstration Method:*The permittee shall retain initial permit calculations or test results that indicating that uncontrolled particulate emissions are less than the 401 KAR 59:010 allowable emission rate.

b) Pursuant to 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown; and

2) Pursuant to 401 KAR 50:055, Section 1(1), visible emissions due to shutdown or malfunctions which temporarily exceed the 6-minute standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method:

1) During normal operation of the cyclone and scrubber no compliance demonstration is necessary.
2) If the dryer is in operation during any period of malfunction of the cyclone or the scrubber, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

334/3717 Ribbon Blender
(Controlled by 334/3716 Cyclone and 334/3231 Scrubber):

a) The permittee shall retain initial permit calculations or test results that indicating that uncontrolled particulate emissions are less than the 401 KAR 59:010 allowable emission rate.

b) Pursuant to 401 KAR 59:005, Section 3(2), the permittee shall record and retain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the process equipment or air pollution control equipment.

c) During all periods of malfunction of the scrubber or cyclone, if any of the process units are in operation , a log with records every four (4) hours of the following information shall be kept:
   i Results from a Reference Method 9 observation, **OR**;
   ii. Whether any air emissions were visible
   If visible emissions are observed, the permittee shall record the following information:
   iii. Whether the visible emissions were normal for the process.
   iv. The color of the emissions and whether the emissions were light or heavy.
   v. The cause of the abnormal visible emissions.
   vi. Any corrective actions taken.

334/3231 PVP-I Scrubber:
(State Origin Requirements)

c) For each day that the process is operating, the permittee shall maintain records of operation, routine and nonroutine maintenance, duration and cause of any shut-downs .

d) Production records and emission estimates for each product controlled by the scrubber.

6. Specific Reporting Requirements:

334/3717 Ribbon Blender

(Controlled by 334/3716 Cyclone and 334/3231 Scrubber):

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard or particulate emissions exceeding the standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

c) Pursuant to 401 KAR 59:005, Section 3(1)(d), the Paducah Regional Office shall be notified of any modification (as defined in 401 KAR 59:001) to this affected facility. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Cabinet may request additional relevant information subsequent to this notice.

(State Origin Requirements)

d) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

e) Pursuant to 401 KAR 50:055, Section 1(3) and with respect to 401 KAR 63:021, if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in emissions exceeding a standard formerly contained in 401 KAR 63:021 or 401 KAR 63:022, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions:

334/3716 Cyclone:
334/3231 Scrubber:

a) The pollution control devices shall be maintained and operated in accordance with good operating procedures as described by the Environmental Compliance Task Manual retained at the source.

b) The permittee shall retain the Environmental Compliance Task Manual addressing the air pollution control devices listed above.

c) The permittee shall record and retain records of maintenance performed on the air pollution control devices listed above.

d) **(State Origin Requirements)** Pursuant to 401 KAR 50:035 Section 1 (7)(b) any control equipment or procedures previously used to achieve compliance with a standard formally contained in 401 KAR 63:021 or 401 KAR 63:022 shall not be removed or altered unless prior approval is obtained from the division. Control equipment may be removed upon approval by the division of calculations that demonstrate that emissions of Toxic Air Pollutants would not have exceeded an ASL level as defined in the former 401 KAR 63:022, Appendix B. Control equipment may also be removed upon the division's approval of results from an approved Air Quality Model, that demonstrates that Maximum ground level concentrations would not have exceed the Threshold Ambient Limits contained in the former 401 KAR 63:022, Appendix B

Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdowns or malfunctions which temporarily exceed a standard formerly contained in the former 401 KAR 63:021 or 401 KAR 63:022 shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the division makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall maintain records of batch production in the 334 Building. During periods of operation where controls were required to comply with or preclude the requirements of the former 401 KAR 63:021 or 401 KAR 63:022, the permittee shall record and maintain a log of operation, routine and nonroutine maintenance, duration and cause of any shut-downs of the scrubber.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: 326 AREA

Emission Point(s)	Process ID	Process Description
16 (326)	326	Batch Production Processes

Emission Point(s)	Process ID	Control Equipment
16 (326)	326	None

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: GATEWAY FACILITY (GWY) (New Construction)

Emission Point(s)	Process ID	Process Description
17 (GWY)	GWY	Gateway R & D Facility

Emission Point(s)	Process ID	Description	Control Equipment
17 (GWY)	GWY	Gateway Facility	Gateway Thermal Oxidizer

Process Equipment	Date Installed
3 Catalyst Pots	7/1/99
Monomer Storage Tank	7/1/99
(2) Solvent Tanks	7/1/99
Reactor	7/1/99
(2) Feed and Receiver Tanks	7/1/99
Hold Tanks	7/1/99
Filters	7/1/99

APPLICABLE REGULATIONS:
The source has elected to install and operate a thermal oxidizer to preclude the applicability of 401 KAR 51:017 Prevention of Significant Deterioration of Air Quality.

401 KAR 63:020 *Potentially hazardous matter or toxic substances* (New construction)

1. **Operating Limitations**: None

2. **Emission Limitations:**
In order to preclude the applicability of 401 KAR 51:017, total emission of VOC from the Gateway Process shall not exceed 36 tons per year based on any twelve (12) consecutive months.

Compliance Demonstration Method:

i. For fugitive emissions:
The permittee shall maintain a count of pumps, valves and flanges. On-site emissions calculations shall be updated once per year.

ii. For process emissions:
VOC emissions = P1 x (Highest VOC Product emission rate) x (1-control efficiency)
+ P2 x (Highest VOC Product emission rate) x (1-0%)
where: P1 =Duration of 15 minute periods of process operation with control device combustion temperature at or above the value established in the Revised application form (required in 3. Testing Requirements below) for 7 1/2 minutes or greater;
P2 =Duration of 15 minute periods of process operation with control device combustion temperature below the value established in the Revised application form (required in 3. Testing Requirements below) for 7 1/2 minutes or greater.

Control Efficiency = 95% or the last value determined during a performance test.

(Highest registered VOC product is currently 32 lbs/hour, see Section **6.Specific Reporting Requirements:**

3. Testing Requirements:

a) Prior to a commencement of construction, permittee shall supply the division with the manufacturer's recommended minimum operating temperature of the thermal oxidizer and an updated DEP 7007N form for this control equipment. Process equipment shall not commence operation without approval of the division.
b) Pursuant to 401 KAR 50:045, the division may request a performance test upon submittal of the final design.

4. Specific Monitoring Requirements: The permittee shall install, calibrate, operate, and maintain continuous monitoring devices to measure the thermal oxidizer combustion temperature.

5. Specific Recordkeeping Requirements: The permittee shall maintain records of the following information:

a) Type and number of batches of products produced in the Gateway R&D facility.
b) Initial calculation of maximum VOC emissions of each product produced.
c) Annual calculation of fugitive VOC emissions.
d) The monthly calculation of nonfugitive VOC emissions, calculated using the equations in **2. Emission Limitations:**
e) All maintenance activities performed on the thermal oxidizer.
f) The permittee shall record and retain the following records for the thermal oxidizer temperature monitoring system:
   1) The permittee shall record the thermal oxidizer combustion temperature. The output of the temperature monitoring device shall be recorded at least once every fifteen minutes, except during periods of monitoring system calibration checks and periods when the monitoring system is malfunctioning. Temperature records shall be maintained and made available for inspection.
   2) The permittee shall record and retain records documenting the completion of calibration checks and maintenance specified in the monitoring system's manufacturer's instructions or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

3) The permittee shall maintain records of the occurrence and duration of any period during which the monitoring system is malfunctioning or inoperative.

6. Specific Reporting Requirements:

a) Source shall maintain initial emission calculations of all products and materials produced in the Gateway R&D facility. Prior to beginning production of a product with higher uncontrolled emissions than those currently registered with the division, permittee shall submit a revised Form DEP 7007B to the Frankfort Central Office.

b) Prior to commencement of construction, the permittee shall supply the division with the manufacturer's recommended minimum operating temperature of the thermal oxidizer and an updated DEP 7007N form for this control equipment. Process equipment shall not commence operation without written approval of the division.

7. Specific Control Equipment Operating Conditions:

236 Process : Pursuant to 401 KAR 50:035 Section 1 (7)(b) any control equipment or procedures previously used to achieve compliance with a standard formally contained in 401 KAR 63:022 shall not be removed or altered unless prior approval is obtained from the division. Control equipment may be removed upon approval by the division of calculations that demonstrate that emissions of Toxic Air Pollutants would not have exceeded an ASL level as defined in the former 401 KAR 63:022, Appendix B. Control equipment may also be removed upon the division's approval of results from an approved Air Quality Model, that demonstrates that Maximum ground level concentrations would not have exceed the Threshold Ambient Limits contained in the former 401 KAR 63:022, Appendix B.

Compliance Demonstration Method: The permittee shall maintain records of when the 236 process is venting to the Gateway Incinerator. During periods of operation where controls were required to comply with or preclude the requirements of the former KAR 63:022, the permittee shall record and maintain records of whether the Gateway Incinerator was in operation.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: RILEY BOILER

Emission Point(s)	Process ID	Process Description
18	Riley Coal/Comparable Fuels Boiler	139 MMBtu/hr Boiler

Emission Point(s)	Control Equipment
18	Multi-cyclone 115/3704 and Baghouse 115/3601

Note: An ammonia laden gas stream from the 211 and 222 pyrrolidone units stripper is also combusted in this unit.

APPLICABLE REGULATIONS:
401 KAR 51:017. *Prevention of Significant Deterioration of Air Quality* applies to the combustion of ammonia laden gas from the 211 and 222 pyrrolidone units stripper.
401 KAR 50:055. *General Compliance Requirements*.
401 KAR 61:015. *Existing Indirect Heat Exchangers* constructed prior to April 9, 1972.
40 CFR 261. *Identification and Listing of Hazardous Waste*.

1. Operating Limitations:

a) The Comparable Fuels stream burned shall comply with the Comparable/Syngas Fuels Exclusion (40 CFR 261.38).

Compliance Demonstration Method: Permittee shall maintain records of all Comparable fuels burned in the Riley Boiler.

b) Pursuant to 401 KAR 51:017, injection of the waste gas shall be at the same location in the coal combustion zone as during the source's last performance test.

Compliance Demonstration Method: Periodic maintenance records of gas injection system.

2. Emission Limitations:

a) Pursuant to 401 KAR 61:015, Section 4(1), particulate emissions shall not exceed 0.25 lb/MMBtu on a 3 hour average basis, except as follows:

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed the three-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: Maintain calculation of monthly average emission rate as follows:

lb PM/MMBtu = {(EFCoal x Tons Coal) + (EFCF x 10^3 Gals CF) x {1 - Efficiency/100}
÷ {(HVCoal x Tons Coal) + (HVCF x 10^3 Gals CF)}

where: EFCoal = coal emission factor of 66 lb PM/ton coal or the measured value from the last emissions test.
Tons Coal = total tons of coal burned during the month.
EFCF = Comparable Fuels emission factor of 1.58 lb PM/10^3 gallons Comparable Fuels or the measured value from the last emissions test
10^3 Gal CF = thousand gallons Comparable Fuels burned during the month
HVCoal = average heat content for coal burned during the month, MMBtu/ton
HVCF = representative or lower heat content for Comparable Fuels burned during the month, MMBtu/10^3 gals
Efficiency = 99.6% or the measured value from the last emissions test

b) Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity on a 6 minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the 6-minute average opacity standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).
2) Pursuant to 401 KAR 61:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.
3) Pursuant to 401 KAR 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
4) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method: The permittee shall preform Method 9 test at least once every 3 months and monitoring the operation of the baghouse.

c) When burning coal alone, pursuant to 401 KAR 61:015, Section 5(1), sulfur dioxide emissions shall not exceed 6.0 lbs/MMBtu on a 24 hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: The permittee shall preform calculation of 24-hour average emission rate as follows:

lb SO_2/MMBtu = (38 x %S) lb SO_2/ton coal ÷ HVCoal

where:
%S = average coal weight percent sulfur content
HVCoal = average coal heat content

d) When burning coal and Comparable Fuels simultaneously, pursuant to 401 KAR 61:015, Section 5(2), sulfur dioxide emissions on a 24-hour average basis shall not exceed the allowable emission rate determined by proration using the following formula, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Allowable SO_2 Emissions lb/MMBtu = {y(3.4) +z(6.0)}÷{y + z}
where:

y = the percent of total heat input derived from Comparable Fuels (liquid fuel)
z = the percent of total heat input derived from coal (solid fuel)

Compliance Demonstration Method: Calculation of 24-hour average emission rate as follows (Comparable Fuels stream contains negligible sulfur):

lb SO_2/MMBtu = {(38 x %S) lb SO_2/tons coal x Tons Coal)
÷ {(HVCoal x Tons Coal) + (HVCF x 10^3 Gals CF)}

where:
%S = average coal weight percent sulfur content
Tons Coal = total tons of coal burned during the 24-hour period
HVCoal = average heat content for coal burned, MMBtu/ton
10^3 Gal CF = thousand gallons Comparable Fuels burned
HVCF = representative or lower heat content for Comparable Fuels burned, MMBtu/10^3 gals

e) Pursuant to 401 KAR 51:017, combined nitrogen oxides emissions from the burning of coal and combustion of the waste gas stream, expressed as nitrogen dioxide shall not exceed 122.8 lbs per hour on a monthly average, except as follows.

Pursuant to 401 KAR 50:055, Section 1(1), nitrogen oxides emissions due to shutdown or malfunctions which temporarily exceed the monthly average standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: Historical and performance testing during term of the permit of nitrogen oxides emissions.

3. Testing Requirements:

a) An EPA Method 9 test shall be conducted at least once every 3 calendar months during the term of this permit.

b) As long as the boiler is used to combust an ammonia-laden waste gas stream, the permittee shall conduct testing for NOx once during the term of this permit. Testing for NOx shall be performed using Reference Method 7. Production of 211/222 pyrrolidone shall be operated to give the maximum ammonia production to determine compliance with the 122.8 lbs/hour nitrogen oxides emission rate limit, expressed as nitrogen dioxide.

c) Not later than 180 days after initial combustion of Comparable Fuels, the permittee shall conduct testing for NOx using Reference Method 7. Testing is only required for the combustion of Comparable fuels.

d) The permittee shall conduct testing for particulate once during the term of this permit using Reference Method 5.

4. Specific Monitoring Requirements:

a) The permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the measurement of the differential pressure across the individual compartment on Baghouse 115/3601.
b) A yearly inspection of the waste gas injection system into the Riley Boiler shall be performed.

5. Specific Recordkeeping Requirements:

a) Vendor certifications representative of the heat and sulfur content for all coal burned. The permittee shall either perform the appropriate ASTM methods for each batch processed by the vendor, or have a contractual agreement with its supplier to have the ASTM methods performed on each batch processed by the vendor.
b) Analysis or calculations of the representative heat content for the Comparable Fuels stream burned. This can be a worst-case (lower) heat content.
c) Results of all opacity and particulate emission tests performed on this emission unit.
d) Nitrogen oxides emissions measurements and concurrent 211 and 222 pyrrolidone production rate during the emissions measurements.
e) Monthly pyrrolidone production rate for the 211 and 222 pyrrolidone units.
f) Daily records of the differential static pressure across each baghouse compartment.
g) Daily log of the following information shall be kept:
h) i. Whether any air emissions were visible from the stack.
If visible emissions are observed, the permittee shall record the following information:
ii A EPA Method 9 test, **OR**

iii. Whether the visible emissions were normal for the process.
iv. The color of the emissions and whether the emissions were light or heavy.
v. The cause of the abnormal visible emissions.
vi. Corrective actions taken.

i) Daily log of the baghouse cleaning cycle sequencing.
j) Daily log of the plant air system pressure.

k) Daily log of the status of the baghouse hoppers.
l) A log of the routine and scheduled maintenance performed on the Riley Boiler, baghouse and on the waste gas injection system to the Riley Boiler.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour standard, sulfur dioxide emissions exceeding the 24-hour average standard, or nitrogen oxides exceeding the monthly standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the average standard, sulfur dioxide emissions exceeding the 24-hour average standard, or nitrogen oxides exceeding the monthly standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions:

Multi-cyclone 115/3704:
Baghouse 115/3601:

a) The pollution control devices listed above shall be maintained and operated in accordance with good operating procedures as described by the Environmental Compliance Task Manual retained at the source.

b) The permittee shall retain the Environmental Compliance Task Manual addressing the air pollution control devices listed above.

c) The permittee shall record and retain records of maintenance performed on the air pollution control devices listed above.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: BABCOCK AND WILCOX BOILER

Emission Point(s)	Process ID	Process Description
19	Babcock and Wilcox Natural Gas/ Fuel Oil Fired Boiler 115/5303	77 MMBtu/hr Boiler

Emission Point(s)	Control Equipment
19	None

APPLICABLE REGULATIONS:
401 KAR 50:055. *General Compliance Requirements*
401 KAR 61:015. *Existing Indirect Heat Exchangers* constructed prior to April 9, 1972

1. Operating Limitations: None

2. Emission Limitations:

a) Pursuant to 401 KAR 61:015, Section 4(1), particulate emissions shall not exceed 0.25 lb/MMBtu on a 3 hour average basis, except as provided below.

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed the average standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: While burning only fuel oil or natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

b) Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity on a 6 minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the 6-minute average opacity standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

2) Pursuant to 401 KAR 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's

recommendations.

3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method: While burning only the natural gas or fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

c) Pursuant to 401 KAR 61:015, Section 5(1), sulfur dioxide emissions shall not exceed 4.0 lbs/MMBtu on a 24 hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: When the indirect heat exchanger is burning natural gas, the permittee is assumed to be in compliance with the sulfur dioxide emission standard. When burning fuel oil, the compliance demonstration method shall be a calculation of the 24 hour average emission rate upon request by the division, using emission factor, 24 hour average fuel oil heat content, and 24 hour average fuel oil weight percent sulfur as follows:

lb SO_2/MMBtu = (142 x oil weight % sulfur) lb $SO_2/10^3$ gal oil ÷ MMBtu/10^3 gal oil.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a) The permittee shall retain annual (calendar year) records of the types of fuel burned in the boiler.
b) The permittee shall retain records representative of the heat content for all fuel oil burned.
c) The permittee shall retain records representative of the sulfur content for all fuel oil. burned.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide

emissions exceeding the 24-hour average standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: WICKES BOILER

Emission Point(s)	Process ID	Process Description
20	Wickes Natural Gas/Fuel Oil/Comparable Fuels Fired Boiler 115/5304	76 MMBtu/hr Boiler

Emission Point(s)	Control Equipment
20	None

APPLICABLE REGULATIONS:
401 KAR 50:055. *General Compliance Requirements*
401 KAR 61:015. *Existing Indirect Heat Exchangers* constructed prior to April 9, 1972
40 CFR 261. *Identification and Listing of Hazardous Waste*

1. **Operating Limitations**: Permittee shall burn only materials that comply with the Comparable/Syngas Fuels Exclusion (40 CFR 261.38)

Compliance Demonstration Method: Permittee shall maintain records of all fuels burned in the Wickes Boiler.

2. **Emission Limitations:**

a) Pursuant to 401 KAR 61:015, Section 4(1), particulate emissions shall not exceed 0.25 lb/MMBtu on a three hour average basis, except as follows.

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed the three-hour average standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: While burning only natural gas, fuel oil and comparable fuels as defined by 40 CFR 261, the permittee shall be deemed to be in compliance with the applicable emission standard. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

b) Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity on a 6 minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the 6-minute average opacity standard shall not be deemed in violation of such standards if the

requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

2) Pursuant to 401 KAR 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method: While burning only natural gas, fuel oil and comparable fuels the permittee shall be deemed to be in compliance with the applicable emission standard. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

c) Pursuant to 401 KAR 61:015, Section 5(1), sulfur dioxide emissions shall not exceed 4.0 lbs/MMBtu on a 24 hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: While burning only natural gas or Comparable Fuels the permittee shall be deemed to be in compliance with the applicable emission standards. When burning fuel oil, the compliance demonstration method shall be a calculation of the 24 hour average emission rate upon request by the division, using emission factor, 24 hour average fuel oil heat content, and 24 hour average fuel oil weight percent sulfur as follows:

lb SO_2/MMBtu = (142 x oil weight % sulfur) lb $SO_2/10^3$ gal oil ÷ MMBtu/10^3 gal oil.

3. Testing Requirements:

In addition to any waste analysis plan required by 40 CFR 261.38, the permittee shall calculate by either testing results or through inherent process knowledge the sulfur content of all comparable fuels burned in the boiler.

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a) The permittee shall retain annual (calendar year) records of the types of fuel burned in the boiler.

b) The permittee shall retain records representative of the heat content of all fuel oil burned.

c) The permittee shall retain records representative of the sulfur content of all fuel oil burned.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: STRUTHERS PARACYMENE HEATER

Emission Point(s)	Process ID	Process Description
21	Natural Gas/Fuel Oil Fired Indirect Heat Exchanger 115/5306	12.35 MMBtu/hr Boiler

Emission Point(s)	Control Equipment
21	None

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*
401 KAR 61:015. *Existing Indirect Heat Exchangers* constructed prior to April 9, 1972

1. Operating Limitations: None

2. Emission Limitations:

a) Pursuant to 401 KAR 61:015, Section 4(1), particulate emissions shall not exceed 0.25 lb/MMBtu on a 3 hour average basis, except as follows.

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed the three-hour average standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: While burning natural gas and fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

b) Pursuant to 401 KAR 61:015, Section 4(2), visible emissions shall not exceed 20% opacity on a 6 minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the 6-minute average opacity standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

2) Pursuant to 401 KAR 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up

to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

3) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method: While burning natural gas and fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

c) Pursuant to 401 KAR 61:015, Section 5(1), sulfur dioxide emissions shall not exceed 4.0 lbs/MMBtu on a 24 hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: When the indirect heat exchanger is burning natural gas, the permittee is assumed to be in compliance with the sulfur dioxide emission standard. When burning fuel oil, the compliance demonstration method shall be a calculation of the 24 hour average emission rate upon request by the division, using emission factor, 24 hour average fuel oil heat content, and 24 hour average fuel oil weight percent sulfur as follows:

lb SO_2/MMBtu = (142 x oil weight % sulfur) lb $SO_2/10^3$ gal oil ÷ MMBtu/10^3 gal oil.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a) The permittee shall retain annual (calendar year) records of the types of fuel burned in the boiler.
b) The permittee shall retain records representative of heat content of all fuel burned.
c) The permittee shall retain records representative of sulfur content of all fuel oil burned.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: ZURN BOILER

Emission Point(s)	Process ID	Process Description
22	Zurn Natural Gas/ Oil Fired Boiler 115/5328	149 MMBtu/hr Boiler

Emission Point(s)	Control Equipment
22	Low NOx Burners

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*
401 KAR 59:005. *General Provisions*
401 KAR 59:015. *New Indirect Heat Exchanger* constructed after April 9, 1972
Exemption: 401 KAR 60:005.(40 CFR 60 Subpart Dc) *Standards of performance for industrial-commercial-institutional steam generating units* does not apply as construction date was before June 19, 1984.*

*Unit was constructed and operational prior to 1972, but installed in Kentucky in November 1986.

1. Operating Limitations:

To preclude the applicability of 410 KAR 51:017 (PSD) for sulfur dioxide emissions, No. 2 Fuel Oil use shall not exceed 700,000 gallons per year for any twelve (12) consecutive months, and the sulfur content of No. 2 fuel oil burned shall not exceed 0.5 weight percent.

2. Emission Limitations:

a) Pursuant to 401 KAR 59:015, Section 4(1)(b), particulate emissions shall not exceed 0.10 lb/MMBtu on a 3 hour basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed the three-hour average standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: When burning only natural gas or fuel oil, permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

b) Pursuant to 401 KAR 59:015, Section 4(2), visible emissions shall not exceed 20% opacity on a 6 minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the 6-minute average opacity standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).
2) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.
3) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
4) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method: When burning only natural gas or #2 fuel oil, permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

c) Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu on a 24 hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: When the indirect heat exchanger is burning natural gas, the permittee is assumed to be in compliance with the sulfur dioxide emission standard. When burning No. 2 fuel oil, the compliance demonstration method shall be a calculation of the calendar month average emission rate upon request by the division, using emission factor, average fuel oil heat content, and average fuel oil weight percent sulfur as follows:

lb SO_2/MMBtu = (142 x oil weight % sulfur) lb $SO_2/10^3$ gal oil ÷ MMBtu/10^3 gal oil.

d) In order to preclude the applicability of 401 KAR 51:017 (PSD) for sulfur dioxide emissions, sulfur dioxide emissions shall not equal or exceed 36 tons per year for any twelve (12) consecutive months.

Compliance Demonstration Method: Fuel oil use is limited to 700,000 gallons per year, and fuel oil sulfur content limited to 0.5 weight percent. Permittee shall retain monthly records of fuel oil use and vendor certifications representative of the sulfur content of all fuel oil burned.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a) The permittee shall retain annual (calendar year) records of the types of fuel burned in the boiler.
b) The permittee shall retain records representative of heat content of all fuel oil burned.
c) The permittee shall retain records representative of sulfur content of all fuel oil burned.
d) The permittee shall record the amount of No. 2 fuel oil burned each month.
e) The permittee shall record monthly the annual sulfur dioxide emission calculations for any twelve (12) consecutive months.
f) Pursuant to 401 KAR 59:005, Section 3(2), the permittee shall record the occurrence and duration of any startup, shutdown, or malfunction in the operation of the indirect heat exchanger.

6. Specific Reporting Requirements:

a) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard, three-hour average particulate emissions standard, or sulfur dioxide emissions exceeding the 24-hour average standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

b) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice shall include all information specified in Section 1(3).

7. Specific Control Equipment Operating Conditions: Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: FIRST THERMAL SYSTEMS PARACYMENE HEATER

Emission Point(s)	Process ID	Process Description
23	Natural Gas/Fuel Oil Fired Indirect Heat Exchanger 126/5301	10 MMBtu/hr Indirect Heat Exchanger

Emission Point(s)	Control Equipment
23	None

APPLICABLE REGULATIONS:

401 KAR 50:055. *General Compliance Requirements*
401 KAR 59:005. *General Provisions*
401 KAR 59:015. *New Indirect Heat Exchangers* constructed after April 9, 1972
401 KAR 60:005 (40 CFR 60 Subpart Dc). *Standards of performance for small industrial-commercial-institutional steam generating units that commences construction, modification, or reconstruction after June 9, 1989*

1. Operating Limitations:

Pursuant to 40 CFR 60 Subpart Dc, Section 60.42c(h), no oil that contains greater than 0.5 weight percent sulfur shall be combusted.

Compliance Demonstration Method: Records as specified by **5. Specific Recordkeeping Requirements.**

2. Emission Limitations:

a) Pursuant to 401 KAR 59:015, Section 4(1)(b), particulate emissions shall not exceed 0.10 lb/MMBtu on a three-hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), particulate emissions due to shutdown or malfunctions which temporarily exceed the three-hour average standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: While burning only natural gas and #2 fuel oil, the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

b) Pursuant to 401 KAR 59:015, Section 4(2), visible emissions shall not exceed 20% opacity on a 6 minute average basis, except as follows:

1) Pursuant to 401 KAR 50:055, Section 1(1), emissions due to shutdown or malfunctions which temporarily exceed the 6-minute average opacity standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).
2) Pursuant to 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.
3) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
4) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method: While burning only natural gas and #2 fuel oil, the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the type(s) of fuel burned.

c) Pursuant to 401 KAR 59:015, Section 5(1)(b), when burning natural gas sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu on a 24-hour average basis, except as follows. If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used.

Pursuant to 401 KAR 50:055, Section 1(1), sulfur dioxide emissions due to shutdown or malfunctions which temporarily exceed the 24-hour standard shall not be deemed in violation of such standards if the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied, and the Director makes the determinations specified in Section 1(4).

Compliance Demonstration Method: When the indirect heat exchanger is burning natural gas and #2 fuel oil, the permittee is assumed to be in compliance with the sulfur dioxide emission standard.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

a) The permittee shall retain annual (calendar year) records of the types of fuel burned in the boiler.

b) Pursuant to 40 CFR 60 Subpart Dc, Sections 60.42c(h) and 60.48c(f)(1), the permittee shall record the sulfur content of fuel oil burned by obtaining a fuel supplier certification for all fuel oil burned. The fuel supplier certification shall include the following information:

1) The name of the oil supplier; and
2) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60 Subpart Dc, Section 60.41c (ASTM Standard Specifications for Fuel Oils for number 1 and 2 fuel oils).

c) Pursuant to 40 CFR 60 Subpart Dc, Section 60.48c(g), the permittee shall record the amount of natural gas combusted during each day.

d) Pursuant to 40 CFR 60 Subpart Dc, Section 60.48c(g), the permittee shall record the amount of fuel oil combusted during each day.

e) Pursuant to 40 CFR 60 Subpart Dc, Section 60.48c(e), the permittee shall retain records of the quarterly reports required by Section 60.48c(d).

f) Pursuant to 40 CFR 60 Subpart A, Section 60.7(b), and 401 KAR 59:005, Section 3(2), the permittee shall record the occurrence and duration of any startup, shutdown, or malfunction in the operation of the indirect heat exchanger.

6. Specific Reporting Requirements:

a) Pursuant to 40 CFR 60 Subpart A, Section 60.7(a)(4), and 401 KAR 59:005, Section 3(1)(d), the Paducah Regional Office shall be notified of modifications (as defined in 401 KAR 59:001) to this affected facility. This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Cabinet may request additional relevant information subsequent to this notice.

b) Pursuant to 401 KAR 50:055, Section 1(2), the permittee shall notify the Division's Paducah Regional Office in writing no later than 3 days before any planned shutdown or ensuing startup that will result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard. If the shutdown could not have been reasonably foreseen 3 days before the event, notification shall be given immediately following the decision to shut down. Notifications shall include all information specified in Section 1(2).

c) Pursuant to 401 KAR 50:055, Section 1(3), if emissions during malfunctions, unplanned shutdowns or ensuing startups are or may result in opacity exceeding the 6-minute average standard, particulate emissions exceeding the three-hour average standard, or sulfur dioxide emissions exceeding the 24-hour average standard, the permittee shall notify the Division's Paducah Regional Office by telephone as promptly as possible and send a written notice if so requested. Such written notice

shall include all information specified in Section 1(3).

d) Pursuant to 40 CFR 60 Subpart Dc, Sections 60.48c(d), (e)(11), and (f), the permittee shall submit quarterly reports to the Paducah Regional Office. Each quarterly report shall be postmarked by the 30th day following the end of the reporting period, and shall include the following information:

1) Fuel supplier certification, as described in Monitoring Condition 4(b); and
2) A statement signed by the owner or operator that the records of fuel supplier certification submitted represent all of the fuel oil combusted during the quarter.

7. Specific Control Equipment Operating Conditions: Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: NORTH COOLING TOWERS (#1 & #2)

Emission Point(s)	Process ID	Process Description
24	NORTH TWR	North Cooling Towers (#1 & #2)

Emission Point(s)	Control Equipment
24	None

APPLICABLE REGULATIONS:

401 KAR 63:010. *Fugitive Emissions*

1. **Operating Limitations**: Pursuant to 401 KAR 63:010, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

2. **Emission Limitations**: None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements**: None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** Not Applicable

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

EMISSION UNIT: SOUTH COOLING TOWERS (#3 & #4)

Emission Point(s)	Process ID	Process Description
25	SOUTH TWR	South Cooling Towers (#3 & #4)

Emission Point(s)	Control Equipment
25	None

APPLICABLE REGULATIONS:

401 KAR 63:010. *Fugitive Emissions*

1. **Operating Limitations**: Pursuant to 401 KAR 63:010, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

2. **Emission Limitations**: None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements**: None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** Not Applicable

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 50:035, Section 5(4). While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary. Pursuant to 401 KAR 50:035 Section 5(4)(f), additional insignificant activities may be added to this permit as an administrative permit amendment.

SECTION C - INSIGNIFICANT ACTIVITIES

Emission Unit	Source ID	Emission Point	Description	Applicable Regulation
B3D	324/3701	None	B3D Catalyst Charge Hopper	401 KAR 59:010
B1D	215/5301	None	B1D Catalyst Generation Heater	None
PYR	311/3006	311/005SC	Cyclohexylamine Storage Tank	None
PYR	311/3008	311/007SC	Monoethanolamine Storage Tank	None
TANKS	1153001	1153001	Paracymene Tank	None
TANKS	1153005	1153005	Out of Service	None
TANKS	2103004	2103004	Ethanol Tank	None
TANKS	2103008	2103008	Isopropyl Alcohol Tank	None
TANKS	2103014	2103014	C20-C24 Olefins Tank	None
TANKS	2103015	2103015	DMEMA Tank	None
TANKS	2103020	2103020	Monoethylamine Tank	None
TANKS	2103021	2103021	B2D Purf Tank	None
TANKS	2103025	2103025	Vinyl Acetate Tank	None
TANKS	2103030	2103030	B1D Tank	None
TANKS	2103033	2103033	Butyrolactone Product Tank	40 CFR 60.116b(a) and (b)
TANKS	2323204	2323204	Dowtherm Tank	None
TANKS	2353001	2353001	Out of Service Tank	None
TANKS	2353002	2353002	Mixed Alcohol Tank	None
TANKS	2353003	2353003	Alcohol Distillate Tank	None
TANKS	2353004	2353004	Alcohol Distillate Tank	None
TANKS	2353005	2353005	Polectron K30 Tank	None
TANKS	2423006	2423006	Hot Water Tank	None
TANKS	2423101	2423101	Maleic Anhydride Tank	None
TANKS	2423102	2423102	MVE Tank - Pressure Vessel	None
TANKS	3053101	3053101	Diethyl Sulfate Tank	None

SECTION C - INSIGNIFICANT ACTIVITIES

Emission Unit	Source ID	Emission Point	Description	Applicable Regulation
TANKS	3103007	3103007	PVP/VA Polymers Tank	None
TANKS	3103009	3103009	B1D TX City RSO Tank	None
TANKS	3103011	3103011	Sub Py HEP Product Tank	None
TANKS	3103013	3103013	B2D Purf Tank	None
TANKS	3103014	3103014	Sub Py CHP Product Tank	None
TANKS	3103016	3103016	Sub Py LP100 Product Tank	None
TANKS	3103018	3103018	Gantrez HEG-50 Tank	None
TANKS	3113012	3113012	Waste Tank	None
TANKS	3113013	3113013	PVP K90 Tank	None
TANKS	3113014	3113014	Clean Fuels Tank	40 CFR 60.116b(a) and (b)
TANKS	3133101	3133101	Methyl Vinyl Ether Tank	None
TANKS	3133102	3133102	Propane Tank	None
TANKS	3213001	3213001	B2D Crude Rxn Product Tank	None
TANKS	3213018	3213018	B2D Dewatered Tank	None
TANKS	3213028	3213028	BLO Product Tank	None
TANKS	3213030	3213030	Hazardous Waste Tank	40 CFR 60.116b(a) and (b)
TANKS	3233006	3233006	HP B3D Sodium Acetate Tank	None
TANKS	3243209	3243209	Out of Service Tank	None
TANKS	3243262	3243262	B3D 35% HCl Tank	None
TANKS	3243263	3243263	B3D 15% HCl Tank	None
TANKS	3263004	3263004	B3D Sulfuric Tank	None
TANKS	3263201	3263201	VP 45% KOH Tank	None
TANKS	3303010	3303010	20% Caustic Tank	None
TANKS	3303101	3303101	Out of Service Tank	None
TANKS	3333004	3333004	Isopar Oil Tank	None
TANKS	3333101	3333101	MVE Storage Tank	None
TANKS	3333102	3333102	EVE Storage Tank	None
TANKS	3333103	3333103	MVE Storage Tank	None
TANKS	3333104	3333104	MVE Storage Tank	None
TANKS	3333105	3333105	MVE Storage Tank	None

SECTION C - INSIGNIFICANT ACTIVITIES

Emission Unit	Source ID	Emission Point	Description	Applicable Regulation
TANKS	3333106	3333106	MVE Storage Tank	None
TANKS		3333107	NBVE Storage Tank	None
TANKS	3333108	3333108	EVE Storage Tank	None
TANKS	3333109	3333109	MVE Storage Tank	None
TANKS	3353101	3353101	Ammonia Tank	None
TANKS	3403001	3403001	Acetone Tank	None
TANKS	3403002	3403002	Ethanol Tank	None
TANKS	3403003	3403003	Isopropanol Tank	None
TANKS	3403004	3403004	Mixed Alcohol Tank	None
TANKS	3403005	3403005	Butanol Tank	None
TANKS	3403006	3403006	Mixed Alcohol Tank	None
TANKS	3403008	3403008	Recycled Ethanol Tank	None
TANKS	3403009	3403009	Out of Service Tank	None
TANKS	3403010	3403010	Styrene Tank	None
TANKS	3403013	3403013	Recycled Toluene Tank	40 CFR 60.116b(a) and (b)
LOAD	C2LOAD	210/025DR	C2 Loading Rack	None
LOAD	316SOUTH	316/004DR	316 South Loading Rack	None
LOAD	3113012LD	311/013DR	311/3012 Loading Rack	None
LOAD	W1LOAD	321/019DR	W1 Loading Rack	None
LOAD	NX1LOAD	330/003DR	North X1 Loading Rack	None
LOAD	240NLOAD	240/028DR	North 240 Loading Rack	None
LOAD	U2LOAD	330/013DR	U2 Loading Rack	None
240	240/3704 & 240/3708	240/006DR	Fines Collection	401 KAR 63:010
240	240/3701 & 240/3709	240/006DR	Fines Collection	401 KAR 63:010
240	240/3712 & 240/3713	240/006DR	Fines Collection	401 KAR 63:010
240		240/AP01	Air Pallet (AP) Filling System - Train 1	401 KAR 59:010
240		240/AP01	Bulk Bag (BB) Filling System - Train 2	401 KAR 59:010
240		240/AP01	Air Pallet (AP) Filling System - Train 3	401 KAR 59:010

SECTION C - INSIGNIFICANT ACTIVITIES				
Emission Unit	**Source ID**	**Emission Point**	**Description**	**Applicable Regulation**
240		240/AP01	Powder Vacuum Transfer System - Fines from Drumming from 241/37ZZ Repack Filter	401 KAR 59:010
240	241/37AA	240/AP02	Air Pallet Unloader Baghouse	401 KAR 59:010
240	241/37BB	240/AP03	Air Pallet Unloader Baghouse	401 KAR 59:010
240	241/3722	240/AP04	Powder Vacuum Transfer System Powder Unit - Vent from Repack Filter 241/3722	401 KAR 59:010
240		240/AP05	Dust Collection - Air Pallet Loading from Blenders	401 KAR 59:010
240	241/32BB, CC	240/AP05	All Powder/Liquid Mixing Systems - Vent from 241/32BB, CC Slurry/Nitrogen Separators	None
240	336/32ZZ	240/AP06	AN-169 Slurry Storage Tank	40 CFR 60.116b(a) and 60.116b(b)
240	336/32AA	240/AP07	AN-169 Slurry Storage Tank	40 CFR 60.116b(a) and 60.116b(b)
240		240/AP13	Air Pallet Bag Loading Vacuum	None
236	236/3234 & 236/3706	236/010BG	Central Vacuum System for Polyclar Production	401 KAR 59:010
236	236/3705	236/009RE	Air Mill Feed Hopper	401 KAR 59:010
236	236/3706	None	Polyclar drumming from Hopper 236/3706	401 KAR 59:010
236	236/3707	None	Polyclar drumming from Hopper 236/3707	401 KAR 59:010
236	236/3710	236/113BG	Drumming operations from Hopper 236/3710	401 KAR 59:010
236	236/3711	236/113BG	Drumming operations from Hopper 236/3711	401 KAR 59:010
236	236/3711	236/111BG	Product Hopper 236/3711 Loading	401 KAR 59:010
236	236/3712	236/121BG	Product Hopper 236/3712 Loading	401 KAR 59:010
236	236/3716	236/112BG	Cyclone for Dryer 236/3506	401 KAR 59:010
236	236/3710	236/112BG	Drumming operations from Hopper 236/3710	401 KAR 59:010
236	236/3712	236/113BG	Drumming operations from Hopper 236/3712	401 KAR 59:010
315	315/3311	315/047FI	Product Drumming Operation for Kettle 315/3311	401 KAR 59:010
200	200/3704	200/044DR	Product Drumming from Hopper	401 KAR 61:020

SECTION C - INSIGNIFICANT ACTIVITIES

Emission Unit	Source ID	Emission Point	Description	Applicable Regulation
			200/3704	
200	200/3641	200/040DR	Fines Collection from Baghouse 200/3641	401 KAR 63:010
200	200/3708	200/042DR	Product Drumming from Hopper 200/3708	401 KAR 61:020
200	200/3708	200/045DR	Product Drumming from Hopper 200/3708	401 KAR 61:020
200	200/3712	200/041DR	Fines Collection from Dustex 200/3712	401 KAR 63:010
334	None	334/006BL	Central Vacuum System Separator for 334 Building	401 KAR 59:010
UTILITIES	None	None	Coal Handling and Stockpile	401 KAR 59:010
UTILITIES	None	None	Well Pumps (Four)	None
UTILITIES	None	None	Emergency Electrical Generator	None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. For units construct prior to July 2, 1984, performance testing required to demonstrate compliance with 401 KAR 59:010 or 401 KAR 61:020, emissions shall be measured by test method KY 50.

2. Nitrogen Dioxide, Sulfur Dioxide, VOC, and PM_{10}, emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.

3. Compliance with annual emissions limitations imposed pursuant to 401 KAR 50:035, Section 7(1)(a), and contained in this permit, shall be for any twelve (12) consecutive months.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

2. For any affected facility including associated air pollution control equipment that is subject to an emission standard under 40 CFR 63, the permittee shall comply with the startup, shutdown, and malfunction requirements described in 40 CFR 63.6 (e)(3).

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements.
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement;

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 50:035, Permits, Section 7(1)(d)2 and 401 KAR 50:035, Permits, Section 7(2)(c)]

3. In accordance with the requirements of 401 KAR 50:035, Permits, Section 7(2)(c) the permittee shall allow the Cabinet or authorized representatives to perform the following:
   a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
   b. Have access to and copy, at reasonable times, any records required by the permit:
      i. During normal office hours, and
      ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
   c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency; and
   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

5. Summaries of reports of any monitoring required by this permit shall be reported to the division's Paducah Regional Office no later than the six-month anniversary date of this permit and every six months thereafter during the life of this permit, unless otherwise stated in this permit. The permittee may shift to semi-annual reporting on a calendar year basis upon approval of the regional office. If calendar year reporting is approved, the semi-annual reports are due January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to Section 6(1) of 401 KAR 50:035, Permits. All deviations from permit requirements shall be clearly identified in the reports.

6. a. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Division for Air Quality's Paducah Regional Office concerning startups, shutdowns, or malfunctions as follows:
   1. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   2. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

   b. In accordance with the provisions of 401 KAR 50:035, Section 7(1)(e)2, the owner or operator shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by general condition 6 a. above) to the Division for Air Quality's Paducah Regional Office. Prompt reporting shall be defined as follows:

   For **excursions** not defined elsewhere:
   i. For short-term (less than or equal to 24-hours in duration) excursions from, or failure to record the parameters used to periodically monitor the performance of control devices (oxidizers, scrubbers, baghouses, etc), the permittee shall include a summary of the excursions in the bi-annual reporting required by Condition **F.5**. above.
   ii. For longer periods (greater than 24 hours in duration) of excursion or inability to record continuously monitored parameters, the permittee shall contact by phone or fax, the Paducah Regional office by 9 am of the next business day.

   For **exceedences**:
   i. For short-term exceedences from a standard (less than or equal to 3-hours in duration), the permittee shall include a summary of the excursions in the bi-annual reporting required by Condition F.5. above.
   ii. For longer periods of exceedences (greater than 3-hours in duration), the permittee shall contact the Paducah Regional office by 9 am of the next business day.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

6. b. For **other requirements**:
In the event that the permittee is unable to fulfill a requirement (such as a performance test, compliance certification submittal) within the timeframe specified herein, the permittee shall contact the Paducah Regional Office and the Frankfort Central office 72 hours prior to the expiration of the relevant timeframe. Extensions of the timeframes specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

7. Pursuant to 401 KAR 50:035, Permits, Section 7(2)(b), the permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date or by January 30th of each year if calendar year reporting is approved by the regional office, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Division for Air Quality's Paducah Regional Office and the U.S. EPA in accordance with the following requirements:

Division for Air Quality
Paducah Regional Office
4500 Clarks River Road
Paducah, KY 42003-0823

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40510

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

8. In accordance with 401 KAR 50:035, Section 23, the permittee shall provide the division with all information necessary to determine its subject emissions within thirty (30) days of the date the KEIS emission report is mailed to the permittee.

9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL CONDITIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of state 401 KAR 50:035, Permits, Section 7(3)(d) and for federally enforceable permit conditions is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 50:035, Section 12(2)(c);
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the division, in writing, information that the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [401 KAR 50:035, Permits, Section 7(2)(b)3e and 401 KAR 50:035, Permits, Section 7(3)(j)]

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority.

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [401 KAR 50:035, Permits, Section 7(3)(k)]

SECTION G - GENERAL CONDITIONS (CONTINUED)

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [401 KAR 50:035, Permits, Section 7(3)(e)]

8. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6). [401 KAR 50:035, Permits, Section 7(3)(h)]

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 50:035, Permits, Section 8(3)(b)]

11. This permit shall not convey property rights or exclusive privileges. [401 KAR 50:035, Permits, Section 7 (3)(g)]

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry. [401 KAR 50:035, Permits, Section 7(2)(b)5]

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders. [401 KAR 50:035, Permits, Section 8(3)(a)]

15. Permit Shield: Except as provided in State 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be in compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.

16. All previously issued construction and operating permits are hereby null and void.

(b) Permit Expiration and Reapplication Requirements

This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the division. [401 KAR 50:035, Permits, Section 12]

SECTION G - GENERAL CONDITIONS (CONTINUED)

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 50:035, Section 15.

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up, and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Paducah Regional Office in writing, with a copy to the division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to State 401 KAR 50:035, Permits, Section 13(1), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or if construction is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

4. Operation of the affected facilities for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.

SECTION G - GENERAL CONDITIONS (CONTINUED)

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. If the division requires a performance test for the Gateway thermal oxidizer, these performance tests must also be conducted in accordance with General Conditions G(d)6 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the division shall be notified of the actual test date at least ten (10) days prior to the test.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
   d. The permittee notified the division as promptly as possible and submitted written notice of the emergency to the division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e)2, and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.This requirement does not relieve the source of any other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement.

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 50:035, Permits, Section 9(3)]

SECTION G - GENERAL CONDITIONS (CONTINUED)

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:
   RMP Reporting Center
   P.O. Box 3346
   Merrifield, VA, 22116-3346

2. If requested, submit additional relevant information by the division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not applicable

SECTION I - COMPLIANCE SCHEDULE

To implement any new monitoring, recordkeeping, and reporting requirements included herein, the division hereby authorizes a ninty (90) day compliance schedule, beginning with issuance of the final permit, for the following emission points:

1. Low Pressure B3D Reactor 324/3314
2. Acetylene Flare 421/5310
3. 231/3406 SRU Venturi Scrubber
4. Toluene Storage Tank 340/3014 (controlled by Benzene Incinerator 421/5312)
5. 240 DRUM1&2 Packaging System
6. 240 DRUM3&4 Packaging System
7. Scrubber 236/3402
8. Scrubber 236/5375
9. Scrubber 236/5306
10. Scrubber 236/5336
11. Cyclone 236/3701 for Dryer 236/3501
12. Cyclone 236/3708 for Dryer 236/3503
13. Toluene Incinerator 421/5311
14. Baghouse 200/3641
15. Steam Spray Dryer 200/3501 Central Vacuum System
16. Ribbon Blender 334/3717
17. Scrubber 334/3231
18. Cyclone 334/3716
19. Riley Boiler 115/5307
20. Multi-cyclone 115/3704
21. Baghouse 115/3601
22. Babcock and Wilcox Boiler 115/5303
23. Wickes Boiler 115/5304
24. Struthers Paracymene Heater 115/5306
25. Zurn Boiler 115/5328
26. All Environmental Compliance Task Manuals for Air Pollution Control Devices reference in this permit.

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS

As specified in 401 KAR 50:035, Section 8(1), compliance with the conditions of this permit shall be deemed compliance with applicable requirements that are included and are specifically identified in this permit, as of the date of permit issuance. Furthermore, pursuant to 401 KAR 50:035, Section 8(1)(b), the cabinet has determined that the requirements listed in this section are not applicable to the source. This section is not intended to exclude the source from exemption from other applicable requirements.

Pursuant to 401 KAR 50:035, Section 8(3), nothing in this permit shall alter or affect:

(a) 42 USC 7603 (emergency orders, Section 303 of the Act), including the authority of the U.S. EPA in that section;

(b) The liability of the owner or operator of a source for violation of applicable requirements prior to or at the time of permit issuance; or

(c) The ability of U.S. EPA to obtain information from the source pursuant to 42 USC 7414 (Section 114 of the Act).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
FOR	None	Emission Units Subject to 40 CFR 63 Subpart G	40 CFR 63 Subpart G -Section 63.112(e)(2)	When demonstrating compliance using the method specified in 63.112(e), owner/operator is exempt from annual calculation of emission rate using equation in 63.112(a).
FOR	None	Emission Units Subject to 40 CFR 63 Subpart G	40 CFR 63 Subpart G -Section 63.151(j)	Reports are not required if the relevant information has been included and submitted in an operating permit application or amendment.
FOR	232/3402	Absorber 232/3402 Heat Exchange System	40 CFR 63 Subpart F -Section 63.104(c)(1)	The absorber heat exchange system is exempt from the leak detection and repair requirements of Sections 63.102(b)(1) and (2), since the system is operated with the minimum pressure on the cooling water side at least 35 kPa (5.1 psia) greater than the maximum pressure on the process side.
FOR	232/5305	Formaldehyde Incinerator Vent	40 CFR 63 Subpart F -Section 63.102(a)(1)	The provisions of 40 CFR 63 Subparts F and G do not apply during periods of start-up, malfunction, and shutdown (as defined in Section 63.101 of Subpart F). This exemption does not include the startup, malfunction, and shutdown requirements of Subpart A.
FOR	232/5305	Formaldehyde Incinerator Vent	40 CFR 63 Subpart G -Sections 63.118(a)(2)(iv) and 63.152(f)(6)	If all recorded temperatures are within the range established in the Notification of Compliance Status, it is only necessary to record that all values were within the range, rather than calculating and recording a daily average.
FOR	330/3006	Formaldehyde Product Tank	40 CFR 63 Subpart F -Section 63.103(c)(3)	Records of startups, shutdowns, and malfunctions, and continuous monitoring system calibration and maintenance (as required by 63.103(c)(2)) are not required if they pertain solely to Group 2 emission points.
FOR	330/3006	Formaldehyde Product Tank	40 CFR 63 Subpart G -Sections 63.111 and 63.119(a)(3)	Tank is a Group 2 storage vessel since max true vapor pressure of organic HAPs is less than 5.2 kPa. Group 2 storage vessels are exempt from all provisions of Sections 63.119 through 63.123 of Subpart G, with the exception of 63.123(a).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
FOR	330/3007	Formaldehyde Product Tank	40 CFR 63 Subpart F -Section 63.103(c)(3)	Records of startups, shutdowns, and malfunctions, and continuous monitoring system calibration and maintenance (as required by 63.103(c)(2)) are not required if they pertain solely to Group 2 emission points.
FOR	330/3007	Formaldehyde Product Tank	40 CFR 63 Subpart G -Sections 63.111 and 63.119(a)(3)	Tank is a Group 2 storage vessel since max true vapor pressure of organic HAPs is less than 5.2 kPa. Group 2 storage vessels are exempt from all provisions of Sections 63.119 through 63.123 of Subpart G, with the exception of 63.123(a).
FOR	330/3001	Methanol Tank	40 CFR 63 Subpart F -Section 63.100 and July 12, 1995 Determination Letter from US EPA	Tank 300-3001 is not subject to 40 CFR 63 Subparts F or G since it has been determined that it is not part of the formaldehyde unit CMPU.
FOR	232/3001	Blend Absorber Feed Tank	40 CFR 63 Subpart H -Section 63.160(a)	Tank is not a surge control vessel subject to Subpart H, since it is not intended to operate in organic HAP service.
FOR	321/020DR and 323/005DR	Loading Rack Arms V2 and W2	40 CFR 63 Subpart F -Section 63.103(c)(3)	Records of startups, shutdowns, and malfunctions, and continuous monitoring system calibration and maintenance (as required by 63.103(c)(2)) are not required if they pertain solely to Group 2 emission points.
FOR	321/020DR and 323/005DR	Loading Rack Arms V2 and W2	40 CFR 63 Subpart G -Sections 63.111 and 63.126(c)	Arms are a Group 2 transfer rack since max true vapor pressure of organic HAPs loaded is less than 10.3 kPa. Group 2 transfer racks are exempt from all transfer rack provisions, with the exception of the record keeping provisions of 63.130(f).
FOR	Fugitives	All Equipment Subject to 40 CFR 63 Subpart H	40 CFR 63 Subpart F -Section 63.102(a)(1)	The provisions of 40 CFR 63 Subpart F do not apply during periods of start-up, malfunction, and shutdown (as defined in Section 63.101 of Subpart F).
FOR	Fugitives	All Equipment Subject to 40 CFR 63 Subpart H	40 CFR 63 Subpart F -Section 63.102(a)(2)	The provisions of 40 CFR 63 Subpart H do not apply during periods of start-up, malfunction, and process unit shutdown (as defined in Section 63.161 of Subpart H).
FOR	Fugitives	All Equipment Subject to 40 CFR 63 Subpart H	40 CFR 63 Subpart H -Section 63.171(a)	Delay of repair of leaking equipment is allowed if repair is technically infeasible without a process unit shutdown. Repair must occur by the end of the next shutdown.
FOR	Fugitives	All Equipment Subject to 40 CFR 63 Subpart H	40 CFR 63 Subpart H -Section 63.171(b)	Delay of repair of leaking equipment is allowed if equipment is isolated from the process and removed from organic HAP service.
FOR	Fugitives	Pressure Relief Devices in Gas/Vapor Service	40 CFR 63 Subpart H -Sections 63.165(d) and (e)	Pressure relief devices equipped with a rupture disk upstream of the device are exempt from the monitoring and leak detection requirements of 63.165(a) and (b) if a new rupture disk is installed as soon as practicable after each pressure release, but no later than 5 days after the release.
FOR	Fugitives	Sampling Connection Systems	40 CFR 63 Subpart H -Section 63.166(a)	Gases displaced during filling of the sample container are not required to be collected or captured.
FOR	Fugitives	Sampling Connection Systems	40 CFR 63 Subpart H -Section 63.166(c)	In-situ sampling systems and sampling systems without purges are exempt from the requirements of 40 CFR 63.166(a) and (b).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
FOR	Fugitives	Open-Ended Valves or Lines	40 CFR 63 Subpart H -Section 63.167(c)	When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall seal the open end at all other times.
FOR	Fugitives	Open-Ended Valves or Lines	40 CFR 63 Subpart H -Section 63.167(d)	Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from 40 CFR 63.167(a), (b), and (c).
FOR	Fugitives	Valves in Gas/Vapor and Light Liquid Service	40 CFR 63 Subpart H -Sections 63.171(e)	Delay of repair beyond a process shutdown is allowed if; valve assembly replacement is necessary during shutdown; valve supplies have been depleted; supplies had been sufficiently stocked prior to depletion; and next shutdown will occur within 6 months after the first shutdown.
FOR	Fugitives	Valves in Gas/Vapor and Light Liquid Service	40 CFR 63 Subpart H -Section 63.168(h)	Unsafe to monitor valves (63.181(b)(7)(i)) are exempt from the monitoring requirements of 63.168(b) through (f) if the source has a written plan requiring monitoring of the valve as frequently as practicable during safe to monitor times.
FOR	Fugitives	Valves in Gas/Vapor and Light Liquid Service	40 CFR 63 Subpart H -Section 63.168(i)	Difficult to monitor valves (63.181(b)(7)(ii)) are exempt from the monitoring requirements of 63.168(b) through (d) if the source has a written plan requiring monitoring of the valve at least once per calendar year.
FOR	Fugitives	Pumps in Heavy Liquid Service	40 CFR 63 Subpart H -Section 63.171(d)	Delay of repair of pumps is allowed if repair involves; replacing pump seal with a new system that will provide better performance (as specified in 63.176(d)); a dual mechanical seal system (as specified in 63.163(e); pump with no externally actuated shaft (specified in 63.163(f)); or pump will be vented to a closed-vent system and control device (specified in 63.163(g)). Repair must be completed as soon as practicable, but no later than 6 months after leak is detected.
FOR	Fugitives	Instrumentation Systems	40 CFR 63 Subpart H -Section 63.169(a)	If a potential leak in an instrumentation system is repaired as required in 63.169(c) and (d), it is not necessary to monitor the system for leaks.
FOR	Fugitives	Connectors in Gas/Vapor Service and Light Liquid Service	40 CFR 63 Subpart H -Section 63.174(f)	Unsafe to monitor connectors (63.181(b)(7)(i)) are exempt from the monitoring requirements of 63.174(a) if the source has a written plan requiring monitoring of the connector as frequently as practicable during safe to monitor times.
FOR	Fugitives	Connectors in Gas/Vapor Service and Light Liquid Service	40 CFR 63 Subpart H -Section 63.174(g)	Unsafe to repair connectors (63.181(b)(7)(iii)) are exempt from the requirements of 63.174(a), (d), and (e) if the connector will be repaired before the end of the next scheduled process unit shutdown.
FOR	Fugitives	Connectors in Gas/Vapor Service and Light Liquid Service	40 CFR 63 Subpart H -Section 63.174(h)(1)	Inaccessible, glass, or glass-lined connectors (as specified in 63.174(h)(1)) are exempt from the monitoring requirements of 63.174(a) and the recordkeeping and reporting requirements of 63.181 and 63.182.

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
B3D	None	B3D Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	The B3D chemical manufacturing process unit is not subject to 40 CFR 63 Subparts F, G, or H since the unit does not manufacture as a primary product a chemical listed in Table 1 of Subpart F. (Butynediol (B3D) is not listed in Table 1.)
B3D	Fugitives	B3D Emission Unit Fugitive Equipment Leaks	40 CFR 60 Subpart VV (adopted by reference at 401 KAR 60:005)	Equipment in the B3D process unit is not an affected facility under Subpart VV since the process unit does not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489. (Butynediol (B3D and propargyl alcohol are not listed in 40 CFR 60.489.)
B3D	421/5310	Acetylene Flare	401 KAR 50:055 - Section 2(4)	20% opacity standard set forth in 401 KAR 63:015 does not apply during periods of startup and shutdown
B3D	421/5310	Acetylene Flare	401 KAR 50:055 - Sections 1(3) and 2(4)	Since opacity standard set forth in 401 KAR 63:015 does not apply during periods of startup and shutdown, it is not necessary to notify the Director of startups and shutdowns which cause or may cause emissions to exceed the opacity standard.
B3D	421/5310	Acetylene Flare	401 KAR 50:055 - Section 1(1)	Emissions, which due to malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Section 1(4).
B3D	323/3008	LP B3D 45% Formaldehyde Tank	40 CFR 60 Subpart Kb -Section 60.110b(c)	Since capacity is greater than 151 m^3 (39,890 gal) and maximum true vapor pressure of volatile organic liquid stored is less than 3.5 kPa (0.51 psi), tank is exempt from 40 CFR 60 Subpart A and is exempt from all provisions of 40 CFR 60 Subpart Kb, except for 40 CFR 60.116b(a) and 40 CFR 60.116b(b).
B3D	323/3008	LP B3D 45% Formaldehyde Tank	401 KAR 59:005 -Sections 3(2) and 3(1)(d)	Tank is exempt from the recordkeeping/notification general requirements of NSPS Subpart A (under 40 CFR 60.110b(c)), and therefore is exempt from the duplicative requirements in 401 KAR 59:005.
B3D	333/3005	LP B3D Crude Tank	40 CFR 60 Subpart Kb -Section 60.110b(c)	Since capacity is greater than 151 m^3 (39,890 gal) and maximum true vapor pressure of volatile organic liquid stored is less than 3.5 kPa (0.51 psi), tank is exempt from 40 CFR 60 Subpart A and is exempt from all provisions of 40 CFR 60 Subpart Kb, except for 40 CFR 60.116b(a) and 40 CFR 60.116b(b).
B3D	333/3005	LP B3D Crude Tank	401 KAR 59:005 -Sections 3(2) and 3(1)(d)	Tank is exempt from the recordkeeping/notification general requirements of NSPS Subpart A (under 40 CFR 60.110b(c)), and therefore is exempt from the duplicative requirements in 401 KAR 59:005.
B3D	321/3029	HP B3D 3rd Stage Storage Tank	40 CFR 60 Subpart Kb -Section 60.110b(c)	Since capacity is greater than 151 m^3 (39,890 gal) and maximum true vapor pressure of volatile organic liquid stored is less than 3.5 kPa (0.51 psi), tank is exempt from 40 CFR 60 Subpart A and is exempt from all provisions of 40 CFR 60 Subpart Kb, except for 40 CFR 60.116b(a) and 40 CFR 60.116b(b).

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
B3D	321/3029	HP B3D 3rd Stage Storage Tank	401 KAR 59:005 -Sections 3(2) and 3(1)(d)	Tank is exempt from the recordkeeping/notification general requirements of NSPS Subpart A (under 40 CFR 60.110b(c)), and therefore is exempt from the duplicative requirements in 401 KAR 59:005.
B3D	324/3017	5% Formaldehyde Dilution Tank	40 CFR 60 Subpart Kb -Section 60.110b(c)	Since capacity is greater than 151 m^3 (39,890 gal) and maximum true vapor pressure of volatile organic liquid stored is less than 3.5 kPa (0.51 psi), tank is exempt from 40 CFR 60 Subpart A and is exempt from all provisions of 40 CFR 60 Subpart Kb, except for 40 CFR 60.116b(a) and 40 CFR 60.116b(b).
B3D	324/3017	5% Formaldehyde Dilution Tank	401 KAR 59:005 -Sections 3(2) and 3(1)(d)	Tank is exempt from the recordkeeping/notification general requirements of NSPS Subpart A (under 40 CFR 60.110b(c)), and therefore is exempt from the duplicative requirements in 401 KAR 59:005.
B3D	324/3317	B3D 3rd Stage Reactor	40 CFR 60 Subpart RRR (adopted by reference as 401 KAR 60:005)	Reactor is not subject to Subpart RRR since it is not a separate "reactor process" as defined in Subpart RRR. Acetylene purification caustic scrubber is a “product recovery device” which serves to group all HP B3D reactors into a single “reactor process”.
B1D	None	B1D Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	The B1D chemical manufacturing process unit is not subject to 40 CFR 63 Subparts F, G, or H since the unit does not use as a reactant or manufacture as a primary product, by-product, or co-product an organic HAP listed in Table 2 of Subpart F. (Formaldehyde is present in the feed as a trace impurity only.)
BLO	None	BLO Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	The BLO chemical manufacturing process unit is not subject to 40 CFR 63 Subparts F, G, or H since the unit does not use as a reactant or manufacture as a primary product, by-product, or co-product an organic HAP listed in Table 2 of Subpart F.
PYR	None	PYR Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	The PYR chemical manufacturing process unit is not subject to 40 CFR 63 since the unit does not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
PY	Fugitive	PYR Emission Unit Fugitive Equipment Leaks	40 CFR 60 Subpart VV (adopted by reference at 401 KAR 60:005)	Equipment in the PYR process unit is not an affected facility under Subpart VV since the process unit does not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
PYR	211/3505	Pyrrolidone Reactor	40 CFR 60 Subpart RRR (adopted by reference at 401 KAR 60:005)	Reactors in the PYR process unit are not an affected facility under Subpart RRR since the process unit does not produce, as a product, co-product, by-product, or intermediate a chemical listed in 40 CFR 60.707.
VP	None	VP Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	The VP chemical manufacturing process unit is not subject to 40 CFR 63 Subparts F, G, or H since the unit does not use as a reactant or manufacture as a primary product, by-product, or co-product an organic HAP listed in Table 2 of Subpart F.
VP	Fugitives	VP Emission Unit Fugitive Equipment Leaks	40 CFR 60 Subpart VV (adopted by reference at 401 KAR 60:005)	Equipment in the VP process unit is not an affected facility under Subpart VV since the process unit does not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
SRU	None	SRU Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	SRU chemical manufacturing process unit is not subject to 40 CFR 63 Subparts F, G, and H since it does not use as a reactant or manufacture as a product, by-product, or co-product an organic HAP listed in Table 2 of Subpart F.
SRU	231/3402 231/3403	Acetone and Ethanol Distillation Columns	40 CFR 60 Subpart NNN (adopted by reference at 401 KAR 60:005)	Kentucky DAQ has determined that the solvent recovery unit is not subject to Subpart NNN. This determination is contained in a February 10, 1996 letter from DAQ to William Koca at ISP.
SRU	Fugitives	SRU Emission Unit Fugitive Equipment Leaks	40 CFR 60 Subpart VV (adopted by reference at 401 KAR 60:005)	Kentucky DAQ has determined that the solvent recovery unit is not subject to Subpart VV. This determination is contained in a February 10, 1996 letter from DAQ to William Koca at ISP.
SRU	231/3406	SRU Scrubber	401 KAR 50:055 - Section 1(1)	Emissions, which due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Section 1(4).
SRU	330/3011	Recovered 225 Ethanol Tank	40 CFR 60 Subpart Kb (adopted by reference at 401 KAR 60:005): Section 40 CFR 60:110b(d)(2)	Storage vessel is exempt from Subpart Kb since it is a pressure vessel designed to operate in excess of 204.9 kPa (29.7 psi) and without emissions to the atmosphere.
VE	None	VE Emission Unit	40 CFR 63 Subpart F -Section 63.100(b)	The VE chemical manufacturing process unit is not subject to 40 CFR 63 Subparts F, G, or H since the unit does not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
VE	Fugitives	VE Emission Unit Fugitive Equipment Leaks	40 CFR 60 Subpart VV (adopted by reference at 401 KAR 60:005)	Equipment in the VE process unit is not an affected facility under Subpart VV since the process unit does not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
VE	332/3302	Vinyl Ethers Reactor	40 CFR 60 Subpart RRR (adopted by reference at 401 KAR 60:005)	Reactor in the VE process unit is not an affected facility under Subpart RRR since the process unit does not produce, as a product, co-product, by-product, or intermediate a chemical listed in 40 CFR 60.707.
UTILITIES	115/5303 115/5304 115/5307 115/5328 115/5306 126/530 115/5306 126/5301 NORTH TWER & SOUTH TWER	All Indirect Heat Exchangers, North Cooling Tower, South Cooling Tower	401 KAR 50:055 - Section 1(1)	Emissions, which due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and the Director has made the determinations specified in Section 1(4).
UTILITIES	115/5307	139 MMBtu/hr Riley Boiler (Coal Fired)	401 KAR 61:015 -Section 4(2)(b)	Exempt from 61:015 Sec. 4(2) (20% opacity standard) for not more than 6 consecutive min. in any 60 consecutive min. period during cleaning the fire box or blowing soot. At such times opacity must not exceed 40%.

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
UTILITIES	115/5307	139 MMBtu/hr Riley Boiler (Coal Fired)	401 KAR 61:015 -Section 4(2)(c)	Exempt from 61:015 Sec. 4(2) (20% opacity standard) during building a new fire for the period required to bring the boiler up to operating conditions, provided the manufacturer's recommended methods are used and the time does not exceed the manufacturer's recommendations.
UTILITIES	115/5307	139 MMBtu/hr Riley Boiler (Coal Fired)	401 KAR 50:055: General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
UTILITIES	115/5303	77 MMBtu/hr B&W Boiler (Natural Gas/No. 2 Fuel Oil)	401 KAR 61:015 -Section 4(2)(c)	Exempt from 61:015 Sec. 4(2) (20% opacity standard) during building a new fire for the period required to bring the boiler up to operating conditions, provided the manufacturer's recommended methods are used and the time does not exceed the manufacturer's recommendations.
UTILITIES	115/5307	139 MMBtu/hr Riley Boiler (Coal Fired)	401 KAR 50:055: General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
UTILITIES	115/5304	76 MMBtu/hr Wickes Boiler (Natural Gas/No. 2 Fuel Oil/Clean Fuels)	401 KAR 61:015 -Section 4(2)(c)	Exempt from 61:015 Sec. 4(2) (20% opacity standard) during building a new fire for the period required to bring the boiler up to operating conditions, provided the manufacturer's recommended methods are used and the time does not exceed the manufacturer's recommendations.
UTILITIES	115/5304	76 MMBtu/hr Wickes Boiler (Natural Gas/No. 2 Fuel Oil/Clean Fuels)	401 KAR 50:055: General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
UTILITIES	115/5306	12.35 MMBtu/hr East Paracymene Heater (Natural Gas/No. 2 Oil)	401 KAR 61:015 -Section 4(2)(c)	Exempt from 61:015 Sec. 4(2) (20% opacity standard) during building a new fire for the period required to bring the boiler up to operating conditions, provided the manufacturer's recommended methods are used and the time does not exceed the manufacturer's recommendations.
UTILITIES	115/53	12.35 MMBtu/hr East Paracymene Heater (Natural Gas/No. 2 Oil)	401 KAR 50:055: General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
UTILITIES	115/5328	149 MMBtu/hr Zurn Boiler (Natural Gas/No. 2 Fuel Oil)	401 KAR 59:015 -Section 4(2)(b)	Exempt from 401 KAR 59:015 Sec. 4(2) (20% opacity standard) for not more than six consecutive minutes in any sixty consecutive minutes during cleaning the fire box or blowing soot, when the opacity shall not exceed 40%.
UTILITIES	115/5328	149 MMBtu/hr Zurn Boiler (Natural Gas/No. 2 Fuel Oil)	401 KAR 59:015 -Section 4(2)(c)	Exempt from 59:015 Sec. 4(2) (20% opacity standard) during building a new fire for the period required to bring the boiler up to operating conditions, provided the manufacturer's recommended methods are used and the time does not exceed the manufacturer's recommendations.
UTILITIES	115/5328	149 MMBtu/hr Zurn Boiler (Natural Gas/No. 2 Fuel Oil)	401 KAR 50:055: General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
UTILITIES	126/5301	10 MMBtu/hr West Paracymene Heater (Natural Gas/No. 2 Oil)	401 KAR 59:015 -Section 4(2)(b)	Exempt from 59:015 Sec. 4(2) (20% opacity standard) for not more than six consecutive minutes in any sixty consecutive minutes during cleaning the fire box or blowing soot, when the opacity shall not exceed 40%.
UTILITIES	126/5301	10 MMBtu/hr West Paracymene Heater (Natural Gas/No. 2 Oil)	401 KAR 59:015 -Section 4(2)(c)	Exempt from 59:015 Sec. 4(2) (20% opacity standard) during building a new fire for the period required to bring the heater up to operating conditions, provided the manufacturer's recommended methods are used and the time does not exceed the manufacturer's recommendations.
UTILITIES	126/5301	10 MMBtu/hr West Paracymene Heater (Natural Gas/No. 2 Oil)	401 KAR 50:055: General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
UTILITIES	126/5301	10 MMBtu/hr West Paracymene Heater (Natural Gas/No. 2 Oil)	40 CFR 60 Subpart Dc -Section 60.43c(c) [Adopted by Reference as 401 KAR 60:005]	Units with heat input capacities less than 30 MMBtu/hr are not subject to the 20% opacity standard contained in Subpart Dc.
UTILITIES	126/5301	10 MMBtu/hr West Paracymene Heater (Natural Gas/No. 2 Oil)	40 CFR 60 Subpart Dc -Section 60.46c(e) [Adopted by Reference as 401 KAR 60:005]	The SO_2 monitoring requirements of 40 CFR 60.46c do not apply to units using fuel supplier certification to demonstrate compliance with the SO_2 standard.
UTILITIES	NORTH TWER	North Cooling	40 CFR 63 Subpart Q -Section 63.400	The provisions of 40 CFR 63 Subpart Q do not apply to industrial process cooling towers that did not use chromium-based water treatment chemicals on or after September 8, 1984.
UTILITIES	SOUTH TWER	South Cooling Tower	40 CFR 63 Subpart Q -Section 63.400	The provisions of 40 CFR 63 Subpart Q do not apply to industrial process cooling towers that did not use chromium-based water treatment chemicals on or after September 8, 1984.
240	240	240 Building	40 CFR 63 Subpart F -Sections 63.100(b)	240 Building chemical manufacturing process unit(s) are not subject to 40 CFR 63 Subparts F, G, or H (HON) since the units do not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
240	240	240 Building	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the 240 Building process unit is not an affected facility under Subpart VV since the process unit does not product, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
240	240/ DRUM1&2	Packaging System	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
240	240/ DRUM1&2	Packaging System	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
240	240/ DRUM3&4	Packaging System	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
240	240/ DRUM3&4	Packaging System	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
240	240	Benzene Loading Racks	40 CFR 61 Subpart BB -NESHAP for Benzene Transfer Operations (adopted by reference at 401 KAR 57:002) -Section 61.300(a)	240 Building benzene loading is not subject to 40 CFR 61 Subpart BB since facility is not a benzene production facility or bulk terminal, as defined in 61.301.
240	240	Benzene Waste Operations	40 CFR 61 Subpart FF -NESHAP for Benzene Waste Operations: Section 61.342(a)	Facility is exempt from control requirements of 61.342(b) and (c) since the total annual benzene quantity from facility waste is less than 10 Mg/yr, as determined according to 61.342(a)(1)-(4), and 61.355(a)(1) and (2).
240	Fugitives	All Fugitive VOC Emission Components in Benzene Service	40 CFR 61 Subpart J -Section 61.111	Equipment that contains or contacts a fluid that is less than 10 percent benzene by weight (as determined according to 61.245(d)) is not considered to be in benzene service, and is therefore not subject to 40 CFR 61 Subparts J and V.
240	Fugitives	All Fugitive VOC Emission Components in Benzene Service	40 CFR 61 Subpart V -Section 61.242-1(e)	Equipment that is in vacuum service (operating at an internal pressure at least 5 kPa below ambient pressure) is exempt from the control requirements of 61.242-2 to 61.242-11 if it is identified as required in 61.246(e)(5).
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-10(d)	Delay of repair for pumps is allowed if repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and repair is completed as soon as practicable, but not later than 6 months after leak is detected.
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-11(a)	Delay of repair of leaking equipment is allowed if repair is technically infeasible without a process unit shutdown. Repair must occur by the end of the next process unit shutdown.
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-11(b)	Delay of repair of leaking equipment is allowed if equipment is isolated from the process and does not remain in benzene service.
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-2(d)	Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 61.242-2(a) and (b) if the requirements of 61.242-2(d)(1) -(6) are met.
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-2(e)	Each pump designated, as described in 61.246(e)(2), for no detectable emissions is exempt from the requirements of 61.242-2(a), (c), and (d) if the pump meets the requirements of 61.242-2(e)(1) - (3) (including annual testing).
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-2(f)	Pumps equipped with a closed-vent system capable of capturing and transporting any leakage to a control device that complies with the requirements of 61.242-11 are exempt from the requirements of 61.242-2(a) - (e).

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
240	Fugitives	Pumps in Benzene Service	40 CFR 61 Subpart V -Section 61.242-2(g)	Pumps located within the boundary of an unmanned plant site are exempt from the weekly visual inspection requirements of 61.242-2(a)(2) and (d)(4), and the requirements of 61.242-2(d)(5), provided that each pump is visually inspected as often as practicable, and at least monthly.
240	Fugitives	Pressure Relief Devices in Benzene Gas/Vapor Service	40 CFR 61 Subpart V -Section 61.242-11(a)	Delay of repair of leaking equipment is allowed if repair is technically infeasible without a process unit shutdown. Repair must occur by the end of the next process unit shutdown.
240	Fugitives	Pressure Relief Devices in Benzene Gas/Vapor Service	40 CFR 61 Subpart V -Section 61.242-11(b)	Delay of repair of leaking equipment is allowed if equipment is isolated from the process and does not remain in benzene service.
240	Fugitives	Pressure Relief Devices in Benzene Gas/Vapor Service	40 CFR 61 Subpart V -Section 61.242-4(c)	Pressure relief devices equipped with a closed-vent system capable of capturing and transporting any leakage to a control device that complies with the requirements of 61.242-11 are exempt from the requirements of 61.242-4(a) and (b).
240	Fugitives	Sampling Connection Systems in Benzene Service	40 CFR 61 Subpart V -Section 61.242-5(c)	In-situ sampling systems are exempt from the requirements of 61.242-5(a) and (b)
240	Fugitives	Open-Ended Valves or Lines in Benzene Service	40 CFR 61 Subpart V -Section 61.242-6(c)	When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 61.242-6(a) at all other times.
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-10(c)	Delay of repair of valves is allowed if owner/operator demonstrates that emissions of purged material resulting from immediate repair are greater than fugitive emissions likely to result from delay of repair, and when repair occurs purged material is collected and destroyed or recovered in a control device complying with 61.242-11.
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-10(e)	Delay of repair beyond a process shutdown is allowed if; valve assembly replacement is necessary during shutdown; valve supplies have been depleted; supplies had been sufficiently stocked prior to depletion; and next shutdown will occur within 6 months after the first shutdown.
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-11(a)	Delay of repair of leaking equipment is allowed if repair is technically infeasible without a process unit shutdown. Repair must occur by the end of the next process unit shutdown.
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-11(b)	Delay of repair of leaking equipment is allowed if equipment is isolated from the process and does not remain in benzene service.
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-7(f)	Each valve designated, as described in 61.246(e)(2), for no detectable emissions is exempt from the monitoring requirements of 61.242-7(a) if the valve meets the requirements of 61.242-7(f)(1) - (3) (including annual testing).
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-7(h)	Each valve designated, as described in 61.246(f)(2), as difficult to monitor, is exempt from the monitoring requirements of 61.242-7(a) if the valve meets the requirements of 61.242-7(h)(1) - (3) (including annual monitoring).

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
240	Fugitives	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.242-7(g)	Each valve designated, as described in 61.246(f)(1), as unsafe to monitor, is exempt from the monitoring requirements of 61.242-7(a) if the valve meets the requirements of 61.242-7(g)(1) and (2) (including monitoring during safe-to-monitor times).
240	Fugitiv	Valves in Benzene Service	40 CFR 61 Subpart V -Section 61.246(f)(1)	A list of ID numbers for unsafe-to-monitor valves, an explanation stating why each valve is unsafe-to-monitor, and the plan for monitoring each valve shall be recorded in a log that is kept in a readily accessible location.
240	Fugitives	Pressure Relief Devices in Liquid Benzene Service, Flanges, and other Connectors	40 CFR 61 Subpart V -Section 61.242-11(a)	Delay of repair of leaking equipment is allowed if repair is technically infeasible without a process unit shutdown. Repair must occur by the end of the next process unit shutdown.
240	Fugitives	Pressure Relief Devices in Liquid Benzene Service, Flanges, and other Connectors	40 CFR 61 Subpart V -Section 61.242-11(b)	Delay of repair of leaking equipment is allowed if equipment is isolated from the process and does not remain in benzene service.
240	421/5312	Benzene Incinerator	40 CFR 61 Subpart Y -Section 61.271(c)(3)	Closed vent system/control device specifications and requirements listed in 61.271(c)(1) and (c)(2) do not apply during periods of routine maintenance, with such periods not to exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). During such periods the benzene level in tanks required to be controlled by the closed vent system/control device may be lowered but not raised.
240	421/5312	Benzene Incinerator	Exemption from 40 CFR 61 Subpart Y -Section 61.271(c)	Exemption from 40 CFR 61 Subpart Y -Section 61.271(c) is granted for periods longer than 72 hrs/yr. During periods of maintenance storage tanks subject to Subpart Y are routed to Vent-Sorb System. No benzene is pumped to tanks, and Vent-Sorbs are monitored daily for benzene emissions.
240	421/5312	Benzene Incinerator	40 CFR 61 Subpart A -Section 61.14(e)	Monitoring data recorded during periods of unavoidable monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in any data average.
240	421/5312	Benzene Incinerator	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
240	Fugitives	Closed Vent Systems for Capturing Fugitive and Storage Vessel Benzene Emissions	40 CFR 61 Subpart Y -Section 61.271(c)(3)	Closed vent system/control device specifications and requirements listed in 61.271(c)(1) and (c)(2) do not apply during periods of routine maintenance, with such periods not to exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). During such periods the benzene level in tanks required to be controlled by the closed vent system/control device may be lowered but not raised.

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Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
240	Fugitives	Closed Vent Systems for Capturing Fugitive and Storage Vessel Benzene Emissions	40 CFR 61 Subpart V -Section 61.242-11(a)	Delay of repair of leaking equipment is allowed if repair is technically infeasible without a process unit shutdown. Repair must occur by the end of the next process unit shutdown.
240	Fugitives	Closed Vent Systems for Capturing Fugitive and Storage Vessel Benzene Emissions	40 CFR 61 Subpart V -Section 61.242-11(b)	Delay of repair of leaking equipment is allowed if equipment is isolated from the process and does not remain in benzene service.
240	240/3308	Train 4 Reactor	40 CFR 60 Subpart RRR -NSPS for SOCMI Reactor Processes (adopted by reference at 401 KAR 60:005)	Reactor process is not an affected facility as defined in 40 CFR 60 Subpart RRR since the process unit does not produce, as a product, co-product, by-product, or intermediate, a chemical listed in 40 CFR 60.707. Additionally, 40 CFR 60.700(c)(1) exempts reactor processes designed and operated as a batch operation.
240	240/3309	Train 2 Reactor	40 CFR 60 Subpart RRR -NSPS for SOCMI Reactor Processes (adopted by reference at 401 KAR 60:005	Reactor process is not an affected facility as defined in 40 CFR 60 Subpart RRR since the process unit does not produce, as a product, co-product, by-product, or intermediate, a chemical listed in 40 CFR 60.707. Additionally, 40 CFR 60.700(c)(1) exempts reactor processes designed and operated as a batch operation.
240	242/3001	Recycled Benzene Storage Tank	40 CFR 61 Subpart Y -Section 61.271(c)(3)	Closed vent system/control device specifications and requirements listed in 61.271(c)(1) (c)(2) do not apply during periods of routine maintenance, with such periods not to exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). During such periods the benzene level in the tank may be lowered but not raised.
240	242/3001	Recycled Benzene Storage Tank	Requested Exemption from 40 CFR 61 Subpart Y -Section 61.271(c)	Exemption from 40 CFR 61 Subpart Y -Section 61.271(c) is granted for periods longer than 72 hrs/yr. During periods of maintenance storage tanks subject to Subpart Y are routed to Vent-Sorb system. No benzene is pumped to tanks, and Vent-Sorbs are monitored daily for benzene emisions.
240	242/3002	Recycled Benzene Storage Tank	40 CFR 61 Subpart Y -Section 61.271(c)(3)	Closed vent system/control device specifications and requirements listed in 61.271(c)(1) and (c)(2) do not apply during periods of routine maintenance, with such periods not to exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). During such periods the benzene level in the tank may be lowered but not raised.
240	242/3002	Recycled Benzene Storage Tank	Exemption from 40 CFR 61 Subpart Y -Section 61.271(c)	Exemption from 40 CFR 61 Subpart Y -Section 61.271(c) is granted for periods longer than 72 hrs/yr. During periods of maintenance storage tanks subject to Subpart Y are routed to Vent-Sorb system. No benzene is pumped to tanks, and Vent-Sorbs are monitored daily for benzene emissions.
240	242/3005	Benzene Storage Tank	40 CFR 61 Subpart Y -Section 61.271(c)(3)	Closed vent system/control device specifications and requirements listed in 61.271(c)(1) and (c)(2) do not apply during periods of routine maintenance, with such periods not to exceed 72 hours as outlined in the maintenance plan required by 61.272(c)(1)(iii). During such periods the benzene level in the tank may be lowered but not raised.

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
240	242/3005	Benzene Storage Tank	Requested Exemption from 40 CFR 61 Subpart Y -Section 61.271(c)	Exemption from 40 CFR 61 Subpart Y -Section 61.271(c) is granted for periods longer than 72 hrs/yr. During periods of maintenance storage tanks subject to Subpart Y are routed to Vent-Sorb system. No benzene is pumped to tanks, and Vent-Sorbs are monitored daily for benzene emissions.
236	None	236 Building	40 CFR 63 Subpart F -Sections 63.100(b) and 63.100(f)(1)	Process units in the 236 Building are not subject to 40 CFR 63 Subparts F, G, or H (HON) since batch operations are exempted by 63.100(f)(1). Also, the units do not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
236	Fugitives	236 Building Fugitive Equipment Leaks	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the 236 Building is not an affected facility under Subpart VV since process units do not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
236	236/3402 -Scrubber 236/5375 -Scrubber 236/5306 -	236/3402 -Scrubber 236/5375 -Scrubber 236/5306 -Scrubber 236/5336 -Scrubber 421/5312 -Incinerator Gateway Incinerator	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
236	236/3329	Reactor	40 CFR 60 Subpart RRR -NSPS for SOCMI Reactor Processes (adopted by reference at 401 KAR 60:005)	Reactor process is not subject to Subpart RRR since batch operations are exempted by 40 CFR 60.700(c)(1).
236	236/3330	Reactor (Polymerizer)	40 CFR 60 Subpart RRR -NSPS for SOCMI Reactor Processes (adopted by reference at 401 KAR 60:005)	Reactor process is not subject to Subpart RRR since batch operations are exempted by 40 CFR 60.700(c)(1).
236	236/3006	Gantrez Dryer Feed Tank	40 CFR 60 Subpart Kb -Section 60.110b(b)	Since capacity is less than 75 m3 (19,814 gal) tank is exempt from 40 CFR 60 Subpart A and is exempt from all provisions of 40 CFR 60 Subpart Kb, except for 40 CFR 60.116b(a) and (b).
236	236/3006	Gantrez Dryer Feed Tank	401 KAR 59:005 -General Provisions: Sections 3(2) and 3(1)(d)	Tank is exempt from the recordkeeping/notification general requirements of NSPS Subpart A (under 40 CFR 60.110b(c)), and therefore is exempt from the duplicative requirements in 401 KAR 59:005.
236	236/3010	DI Water Tank	40 CFR 60 Subpart Kb -Standards of Performance for VOL Storage Vessels (adopted by reference as 401 KAR 60:005)	Tank is not an affected facility as defined in Subpart Kb since tank is not used to store a volatile organic liquid.
236	236/3701	Cyclone for Dryer 236/3501	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
236	236/3701	Cyclone for Dryer 236/3501	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
236	236/3708	Cyclone for Dryer 236/3503	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
236	236/3708	Cyclone for Dryer 236/3503	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
315	None	315 Building	40 CFR 63 Subpart F -Sections 63.100(b) and 63.100(f)(1)	Process units in the 315 Building are not subject to 40 CFR 63 Subparts F, G, or H (HON) since batch operations are exempted by 63.100(f)(1). Also, the units do not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
315	Fugitives	315 Building Fugitive Equipment Leaks	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the 315 Building is not an affected facility under Subpart VV since process units do not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
315	421/5311	Toluene Incinerator	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
315	315/3306	Polymerizer (Reactor)	40 CFR 60 Subpart RRR -NSPS for SOCMI Reactor Processes (adopted by reference at 401 KAR 60:005)	Reactor process is not subject to Subpart RRR since batch operations are exempted by 40 CFR 60.700(c)(1).
315	315/3404	Column Still	40 CFR 60 Subpart NNN -NSPS for SOCMI Distillation Operations (adopted by reference at 401 KAR 60:005)	Distillation unit is not subject to Subpart NNN since batch operations are exempted by 40 CFR 60.700(c)(1).
200	None	200 Building	40 CFR 63 Subpart F -Sections 63.100(b) and 63.100(f)(1)	Process units in the 200 Building are not subject to 40 CFR 63 Subparts F, G, or H (HON) since batch operations are exempted by 63.100(f)(1). Also, the units do not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
200	Fugitives	200 Building Fugitive Equipment Leaks	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the 200 Building is not an affected facility under Subpart VV since process units do not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
200	200/3701, 200/3702, and 200/3717 (Cyclones)	200/3501 Steam Spray Dryer Central Vacuum System	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown
200	200/3701, 200/3702, and 200/3717 (Cyclones)	200/3501 Steam Spray Dryer Central Vacuum System	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
200	200/3705, 200/3712, and 200/3718 (Cyclones)	200/3502 Gas Spray Dryer Central Vacuum System	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown
200	200/3705, 200/3712, and 200/3718 (Cyclones)	200/3502 Gas Spray Dryer Central Vacuum System	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
334	None	334 Building	40 CFR 63 Subpart F -Sections 63.100(b) and 63.100(f)(1)	Process units in the 334 Building are not subject to 40 CFR 63 Subparts F, G, or H (HON) since batch operations are exempted by 63.100(f)(1). Also, the units do not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
334	Fugitives	334 Building Fugitive Equipment Leaks	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the 334 Building is not an affected facility under Subpart VV since process units do not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
334	334/3716 and 334/3231	Cyclone 334/3716 and Scrubber 334/3231	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
334	334/3717	Ribbon Blender (Controlled by Cyclone 334/3716 and Scrubber 334/3231)	401 KAR 50:055 General Compliance Requirements -Section 2(4)	Opacity standards set forth in Kentucky Administrative Regulations do not apply during periods of startup and shutdown.
334	334/3717	Ribbon Blender (Controlled by Cyclone 334/3716 and Scrubber 334/3231)	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and KY DAQ has made the determinations specified in Sec. 1(4).
326B ATCH	None	326 Area Batch Processes	40 CFR 63 Subpart F -Sections 63.100(b) and 63.100(f)(1)	Process units in the 326 Batch Area are not subject to 40 CFR 63 Subparts F, G, or H (HON) since batch operations are exempted by 63.100(f)(1). Also, the units do not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
326B ATCH	Fugitives	326 Batch Area Fugitive Equipment Leaks	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the 326 Batch Area is not an affected facility under Subpart VV since process units do not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.
GWY	None	Gateway	40 CFR 63 Subpart F -Sections 63.100(b) and 63.100(f)(1)	Process unit is not subject to 40 CFR 63 Subparts F, G, or H (HON) since batch operations are exempted by 63.100(f)(1). Also, unit does not manufacture as a primary product a chemical listed in Table 1 of Subpart F.
GWY	Fugitives	Gateway Fugitives	40 CFR 60 Subpart VV -NSPS for SOCMI Equipment Leaks (adopted by reference at 401 KAR 60:005)	Equipment in the Gateway facility is not an affected facility under Subpart VV since process unit does not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.

SECTION J - NON-APPLICABLE REGULATIONS/REQUIREMENTS				
Unit	**Source ID**	**Description**	**Regulation**	**Description of Exemption**
GWY	Fugitives	Gateway Fugitives	40 CFR 63 Subpart J -NESHAP for Equipment Leaks of Benzene (adopted by reference at 401 KAR 57:002).	Equipment in the Gateway facility is not an affected facility under Subpart J since no equipment is in benzene service (greater than or equal to 10% benzene by weight). Benzene is only present in small amounts (much less than 10%) as a residual in some raw materials, and as an impurity in toluene.
GWY		Gateway Catalytic Oxidizer	401 KAR 50:055 -Section 1(1)	Emissions which, due to shutdown and malfunctions, temporarily exceed an emission standard will not be deemed in violation of the standard if all requirements of Section 1 are satisfied and the Director has made the determinations specified in Section 1(4).
GWY		Gateway Reactor	40 CFR 60 Subpart RRR -NSPS for SOCMI Reactor Processes (adopted by reference at 401 KAR 60:005)	Reactor is not subject to Subpart RRR since batch operations are exempted by 40 CFR 60.700(c)(1).
GWY		Gateway Storage Tanks	40 CFR 63 Subpart Y -NESHAP for Benzene Storage Vessels (adopted by reference at 401 KAR 57:002)	Storage vessels are not an affected facility under Subpart Y since tanks will not store benzene. Additionally, capacity of each tank is less than 10,000 gallons so tanks are exempted by 61.270(b).

SECTION K - EQUIPMENT LISTING

This table is not an inclusive or exclusive list of process equipment. All emission units are either listed in Section B of this permit, are Insignificant Activities listed in Section C, or are Trivial Activities. Permittee may install or remove equipment with are not "emission units" as defined by 401 KAR 50:035. Insignificant activities may be installed or removed pursuant to the requirements of "Administrative permit amendments" contained in 401 KAR 50:035.

Section K Equipment listing	
Process Equipment	**Date Commenced**
Formldehyde Unit	
232/3001 Blend Absorber Feed Tank	4/74
232/3301 West A Reactor	3/65
232/3302 East B Reactor	3/65
232/3402 Absorber	4/66
330/3001 Methanol Feed Tank	6/64
330/3006 45% Formaldehyde Tank	3/65
330/3007 45% Formaldehyde Tank	3/65
V2 Loading Rack Arm	1966
W2 Loading Rack Arm	1965
Fugitive Components in VOC Service	1965 - Present
B3D	
Low Pressure B3D Process:	
323/3005 Sodium Acetate Tank	4/93
323/3008 45% Formaldehyde Tank	1/85
324/3314 LP B3D Reactor	12/80
333/3005 LP B3D Crude Tank	1/85
High Pressure B3D Process:	
321/3029 3rd Stage Storage Tank	1/85
323/3001 1st Stage Storage Tank	12/61
323/3002 2nd Stage Storage Tank	12/61
323/3004 Generation Liquor Tank	5/64
324/3001 HP B3D Buffer Mix Tank	1/55
324/3011 33% Form. Feed Tank	12/65
324/3012 33% Form Feed Tank	12/65
324/3210 Acetic Acid Tank	1/55
324/3306/7 B3D 1st Stage Reactors	7/62

Section K Equipment listing	
Process Equipment	**Date Commenced**
324/3315/16 B3D 2nd Stage Reactors	3/88
324/3317 B3D 3rd Stage Reactor	7/96
B3D Purification:	
210/3001 B3D Purification Tank	7/55
210/3002 B3D Purification Tank	4/55
211/3412 Formaldehyde Stripper	6/56
211/3413 B3D Stripper	7/62
310/3000 B3D Purification Tank	1/55
321/3005 B3D Crude Tank	12/61
321/3027 B3D Purification Tank	5/66
328/5302 B3D Softener	2/82
328/5303 B3D Softener	2/82
Propargyl Recovery:	
210/3003 Propargyl Alcohol Tank	11/55
210/3201 Propargyl Alcohol Tank	6/55
210/3202 Propargyl Alcohol Tank	6/55
211/3402 Formaldehyde Tower 702	10/55
211/3403 Methanol Tower 703	10/55
211/3404 Propyl Acetate Tower 704	Modified 5/87
324/3017 Dilution Water Tank	1/85
Acetylene Purification:	
326/3406 Flame Arrestor	7/62
326/3411 Caustic Scrubber	12/84
326/3413 Sulfuric Acid Tower	4/92
326/3235 Acetylene Neutralization Tank	3/94
B3D - Fugitive Components in VOC Service	1955 - present
B1D	
Low Pressure B1D Crude Process:	
220/3203 B3D feed slurry tank	9/63
220/3205 B1D Product Tank	8/63
220/3213 B1D Product Tank	7/84
220/3214 B3D Feed slurry tank	7/84
220/3301 B1D LP Reactor	1/60
220/3302 B1D LP Reactor	1/60

Section K Equipment listing	
Process Equipment	**Date Commenced**
220/3305 B1D LP Reactor	8/84
220/3601 N. U.S. Filter	1/60
220/3602 S. U.S. Filter	1/60
220/5301 B1D RX Settler	9/63
220/5302 B1D RX Settler	9/63
HP B1D Reaction:	
215/3301 HP B1D Reactor	1/55
215/3302 HP B1D Reactor	5/64
215/3219 B1D Storage Tank	7/93
310/3010 HP B1D Storage Tank	5/55
321/3006 B1D Storage Tank	3/60
321/3007 B1D Storage Tank	3/60
HP B1D Purification:	
215/3207 Reflux Drum	2/62
215/3402 Intermediate Tower	7/55
215/3403 Final Tower	12/54
215/3408 Pre-stripper Tower	3/63
215/3410 B1D Residue Stripper Tower	3/63
215/3411 Water Removal Tower	3/63
215/3414 Atm Tower	4/84
215/3415 Flash Tower	7/84
321/3010 B1D Process Tank	2/63
321/3017 B1D Shipping Tank	12/65
HP B1D BuOH Recovery System:	
215/3205 Butanol Decanter	1/55
215/3209 B1D Shift Tank	8/62
215/3210 B1D Shift Tank	1/55
215/3216 Butanol Batch Tank	1/55
215/3217 Butanol Batch Tank	1/55
215/3412 Alcohol Recovery Column	4/67
215/3413 Butanol Tower	7/66
321/3003 Butanol Storage Tank	1/55
321/3015 Butanol Storage Tank	12/65
321/3016 Butanol Storage Tank	12/65
321/3019 Butanol Storage Tank	12/65

Section K Equipment listing	
Process Equipment	**Date Commenced**
BLO	
BLO Area 224:	
215/3002 BLO Storage Tank	1/55
224/3201 BLO Gas Separator	8/60
224/3202 BLO Product Receiver	8/60
224/3203 BLO Product Receiver	8/60
224/3302 BLO Reactor	7/60
224/3401 Lights Tower	7/60
224/3402 Final Tower	7/60
BLO Area 225:	
126/3001 Paracymene Storage Tank	8/90
225/3202 BLO Gas Separator	10/64
225/3208 BLO Product Receiver	1/87
225/3209 BLO Product Receiver	1/87
225/3301 BLO Reactor	9/64
225/3401 Lights Tower	9/65
225/3402 Final Tower	9/65
BLO - Fugitive Components in VOC Service	1955 - Present
2-Pyrrolidones and Sub-Pyrrolidones	
211 2-Pyrrolidone:	
211/3209 Flash Drum	1/55
211/3218 Pyrrolidone Shift Tank	1/55
211/3219 Pyrrolidone Shift Tank	1/55
211/3303 Pyrrolidone Reactor	9/55
211/3411 Ammonia Column	1/60
211/3415 Residue Tower	11/81
211 Sub-Pyrrolidones:	
210/3009 BLO Tank	1/55
210/3216 Vinyl Pyrrolidone Tank	9/89
211/3305 Pyrrolidone Reactor	4/92
310/3006 Octylamine Tank	2/56
310/3012 LP 300 Crude Tank	1/56
311/3001 HEP Crude Tank	8/59

Section K Equipment listing	
Process Equipment	**Date Commenced**
311/3007 Dodecylamine Tank	7/60
311/3011 CHP Crude Tank	4/56
C1_LOAD Tank Wagon Loading	NA
222 2-Pyrrolidone:	
210/3018 2-Pyr Storage Tank	7/60
210/3026 2-Pyr Storage Tank	6/65
222/3002 BLO Feed Tank	8/60
222/3201 Flash Drum	7/60
222/3204 W Pyr Shift Tank	8/60
222/3205 E Pyr Shift Tank	8/60
222/3211 Surge Drum	9/74
222/3302 Pyrrolidone Reactor	12/86
222/3401 Ammonia Tower	7/60
222/3402 Residue Tower	7/60
222/3404 Ammonia Stripper	9/64
321/3004 BLO Storage Tank	7/60
Vinyl Pyrrolidone	
VP Crude Reaction:	
326/3205 Buffer Tank	2/62
326/3208 Buffer Tank	10/62
326/3217 Buffer Tank	9/65
326/3301 Prep Kettle	12/55
326/3302 A Vinylator	1/55
326/3303 B Vinylator	7/60
326/3304 Prep Kettle	10/62
326/3305 C Vinylator	10/62
326/3306 D Vinylator	11/65
VP Distillation:	
210/3016 VP Storage Tank	7/60
210/3017 VP Storage Tank	7/60
210/3028 VP Storage Tank	6/65
223/3004 Residue Storage Tank	11/84
223/3205 VP Product Receiver	8/60

Section K Equipment listing	
Process Equipment	**Date Commenced**
223/3206 VP Product Receiver	8/60
223/3207 VP Holding Tank	4/65
223/3208 VP Product Receiver	7/65
223/3401 Lights Tower	7/60
223/3402 Recovered Pyrr Tower	7/60
223/3403 VP Product Tower	9/65
223/3501 VP Stripper	5/73
235/3013 VP Polyclar Tank	2/68
321/3002 Pyrrolidine Res. Tank	7/60
321/3008 Rec. Pyrrolidine Tank	1/55
326/3003 Crude VP Tank	4/65
326/3213 Flash Drum	12/62
HP VP Production:	
237/3211 Crystallizer/Collector	8/94
237/3001 HP VP Storage Tank	4/65
237/3216 HP Ammonia Tank	5/95
Solvent Recovery	
231/3101 Ethanol By-product Drum	7/65
231/3105 425 Ethanol Tank	12/90
231/3106 425 Ethanol Tank	12/90
231/3107 225 Ethanol Tank	12/89
231/3202 O/H Ethanol Column Drum	12/89
231/3213 O/H Acetone Column Drum	11/89
231/3214 Ethanol By-product Drum	11/89
231/3402 Acetone Column	Modified 1989
231/3403 Ethanol Column	Modified 1989
231/3406 Venturi Scrubber	7/65
330/3002 425 Ethanol Tank	6/64
330/3011 225 Ethanol Tank	10/92
330/3102 225 Acetone Tank	6/64
330/3103 ES-225 Feed Tank	6/64
330/3104 ES-425 Feed Tank	6/64
330/3108 425 Acetone Tank	6/64
330/3109 Rec. ES-225 Shift Tank	5/90

Section K Equipment listing	
Process Equipment	**Date Commenced**
Fugitive Components in VOC Service	1964 - present
Vinyl Ethers	
VE Crude Reaction:	
332/3005 Sulfuric Acid Storage Tank	4/93
332/3206 Catalyst Prep Tank	3/65
332/3207 Catalyst Feed Tank	3/65
332/3209 Carburetor	3/65
332/3214 Crude Receiver Tank	2/65
332/3302 VE Reactor (Vinylator)	2/93
332/3406 Purge Gas Scrubber	3/65
333/3001 Methanol Tank	4/65
333/3002 Ethanol Storage Tank	4/65
333/3003 Butanol Tank	4/65
VE Distillation:	
332/3003 Potassium Hydroxide Tank	3/65
332/3215 Separator	2/65
332/3216 Washer Feed Tank	2/65
332/3218 MVE Shift Tank	3/67
332/3219 MVE Shift Tank	2/65
332/3220 MVE Strip Feed Tank	3/65
332/3229 Strip Decant Separator	4/65
332/3240 MVE Rc. Sludge Tank	6/92
332/3404 Product Tower	9/65
332/3407 Ether Wash Tower	7/65
332/3411 Steam Stripper Tower	12/54
332/3405 Alcohol Column	7/65
332/3408 Dryer	7/65
332/3409 Dryer	7/65
332/3410 Dryer	7/65
Acetylene Purification:	
332/3401 MVE Flame Arrestor	3/65
332/3412 Sulfuric Acid Tower	12/89
332/3403 Caustic Scrubber	4/65
332/3208 Buffer Tank	3/65

Section K Equipment listing	
Process Equipment	**Date Commenced**
VE - Fugitive Components in VOC Service	1965 - Present
Stand-Alone Storage Tanks	
Tank 2103033	2/12/93
Tank 3113002	8/1/98
Tank 3113014	10/1/97
Tank 3133004	12/1/65
Tank 3403013	6/18/87
Tank 3403014	1/1/65
Wastewater Treatment	
Ditches, Basins, Clarifiers, etc.	Modified mid-1970s
240 Building	
240/3201 Catalyst Pot	
240/3202 Benzene Receiver	10/67
240/3207 Benzene Receiver	3/68
240/3221 MA Weigh Tank	3/68
240/3224 Strip Tank	4/73
240/3226 TR 3 Receiving Tank	6/87
240/3229 Blender	6/87
240/3233 Blender	6/87
240/3239 MVE Break Tank	6/87
240/3241 TR 3 Catalyst Pot	10/89
240/3242 Hold Tank	8/90
240/3243 Catalyst Charge Pot	11/92
240/3245 Toluene Initator Tank	4/92
240/3246 MVE Receiver	4/92
240/3246 MVE Receiver	4/92
240/3247 MVE Receiver	4/92
240/3252 TR4 Tol. Init. Tank	4/92
240/3253 Strip Tank	4/92
240/3254 Dryer Feed Tank	4/92
240/3259 MA Heads Tank	7/92
240/3260 Catalyst Charge Pot	1/93

Section K Equipment listing	
Process Equipment	**Date Commenced**
240/3261 Catalyst Charge Pot	5/94
240/3302 TR2 Dryer Feed Tank	8/67
240/3303 Train 1 Reactor	8/68
240/3304 TR1 Dryer Feed Tank	8/68
240/3307 Train 3 Reactor	6/87
240/3308 Train 4 Reactor	4/92
240/3309 Train 2 Reactor	6/93
240/3501 TR2 Dryer	2/67
240/3502 TR1 Dryer	11/67
240/3503 TR3 Dryer	4/87
240/3701 DR2 Dryer	2/67
240/3702 1-B Blender	8/67
240/3703 1-A Blender	8/67
240/3704 TR1 Dryer Cyclone	11/67
240/3705 2-B Blender	8/67
240/3706 2-A Blender	8/67
240/3708 TR1 Dryer Baghouse	7/87
240/3709 TR2 Dryer Baghouse	7/87
240/3710 TR3 Blender	4/87
240/3711 TR3 Blender	4/87
240/3712 TR3 Dryer Cyclone	6/87
240/3713 TR3 Dryer Baghouse	7/87
240/4004 MVE Recovery Unit	6/92
240/DRUM1&2 Packaging - (Vent 240/013DR)	1967
240/DRUM3&4 Packaging - (Vent 240/027DR)	1988
242/3001 Rec. Benzene Tank	8/67
242/3002 Solution Tank	8/67
242/3005 Benzene Tank	8/76
240 - Fugitive Components in VOC Service	1967 - Present
236 Building	
236/2331 Solvent Receiver	4/74
236/3004 PVP Dryer Tank	4/87
236/3005 Dump Tank	4/87
236/3006 Dryer Feed Tank	4/87

Section K Equipment listing	
Process Equipment	**Date Commenced**
236/3010 DI Water Tank	8/90
236/3201 Solvent Receiver	8/67
236/3203 Lecithin Hold Tank	8/67
236/3204 No. 2 Blend Tank	Unknown
236/3205 Amyl Alc. Weigh Tnk	8/67
236/3206 Butanol Weigh Tank	8/67
236/3209 Catalyst Pot	2/68
236/3210 Catalyst Pot	2/68
236/3215 Dilution Tank	1/68
236/3216 VP Feed Tank	12/67
236/3217 Caustic Head Tank	1/68
236/3221 N. Reslurry Tank	12/67
236/3222 S. Reslurry Tank	12/67
236/3229 Caustic Head Tank	9/68
236/3231 Solvent Receiver	4/74
236/3232 Dilution Water Tank	8/81
236/3234 Cyclone Separator	1/83
236/3236 Caustic Head Tank	9/84
236/3237 Dryer Feed Tank	9/84
236/3238 Prep Cat. Charge Tank	4/87
236/3239 PVP Ammonia Tank	4/87
236/3242 Lecithin Mix Tank	4/87
236/3251 Blend Tank	7/87
236/3252 Solvent Receiver	Unknown
236/3256 Catalyst Charge Pot	6/87
236/3258 Receiver	3/88
236/3259 Blend Tank	1/89
236/3263 Lecithin Hold Tank	4/87
236/3264 Styrene Head Tank	11/88
236/3266 Receiver Tank	8/67
236/3269 Hot Water Wash	4/87
236/3270 Slurry Mix Tank	4/87
236/3271 Knockout Pot	7/91
236/3275 Catalyst Charge Pot	12/92
236/3276 Catalyst Charge Pot	9/92

Section K Equipment listing	
Process Equipment	**Date Commenced**
236/3277 PVP Blend Tank	9/92
236/3278 PVP Dryer Feed	9/92
236/3285 Slurry Wash Tank A	4/92
236/3286 Slurry Wash Tank B	4/92
236/3287 Reslurry Tank	4/92
236/3288 Acid Injection Tank	4/92
236/3289 Caustic Injection Tank	4/92
236/3291 Formic Acid Tank	6/92
236/3294 Solvent Receiver	8/93
236/3296 Blend Tank	8/92
236/32102 Filter Feed Tank	10/96
236/32103 Filter Feed Tank	10/96
236/32104 Catalyst Tank	1/97
236/32106 Filter Feed Tank	1/98
236/32107 Dryer Feed Tank	1/98
236/32110 Expansion Tank	1/97
236/32111 Tempered Water Tank	1/97
236/3304 No. 1 Blend Tank	10/67
236/3305 No. 2 Blend Tank	10/67
236/3306 Reactor	10/67
236/3309 S. Blend Tank	10/67
236/3310 Polyclar Reactor	9/97
236/3311 Filter Feed Tank	12/67
236/3312 Filter Feed Tank	12/67
236/3314 Polyclar Reactor	9/97
236/3315 Reactor	10/85
236/3319 Gantrez Reactor	7/86
236/3320 Gantrez Reactor	2/87
236/3321 Gantrez Reactor	7/86
236/3322 Gantrez Reactor	7/85
236/3323 Reactor	4/87
236/3324 Gantrez Reactor	4/87
236/3327 5th Half Ester Reactor	1/88
236/3328 Stripper Reactor	4/88
236/3329 Reactor	9/92

Section K Equipment listing	
Process Equipment	**Date Commenced**
236/3330 Polymerizer	8/92
236/3331 Reactor	1/97
236/3401 Acetone/Ethanol Column	11/70
236/3501 Dryer	12/67
236/3503 Dryer	7/84
236/3504 PVP Dryer	2/87
236/3505 Dryer	2/87
236/3506 Drum Dryer	2/87
236/3509 Drum Dryer	1/97
236/36104 Stage 1 Filter	3/92
236/36105 Stage 2 Filter	3/92
236/36130,1,2,3 Dryer Feed Filters	1/97
236/36134,5,6,7 Transfer Filters	1/97
236/3701 Dryer Cyclone	12/67
236/3702 Product Hopper	12/67
236/3705 Feed Hopper	1/83
236/3706 Packaging Hopper	1/83
236/3707 Hopper	1/83
236/3708 Dryer Cyclone	8/84
236/3709 Product Hopper	8/84
236/3710 Product Hopper	4/87
236/3711 Product Hopper	4/87
236/3712 Product Hopper	4/87
236/3716 Dryer Cyclone	6/87
236/3723 Cyclone Screener	1/90
236/4402 Air Mill	1/83
236/4405 Mill	7/87
236/4406 Mill	6/87
236/4408 Hammer Mill	6/87
236/4412 Mill	6/92
236/4418 Coarse Mill (Insig.)	1/97
236/3730 Product Hopper (Insig.)	1/97
237/3732 Homogenizer (Insig.)	1/97
236 - Fugitive Components in VOC Service	1967 - Present

Section K Equipment listing	
Process Equipment	**Date Commenced**
315 Building	
315/3006 Product Receiver	11/62
315/3007 Product Receiver	11/62
315/3204 NP H_2O Receiver	2/56
315/3205 Receiver	2/56
315/3206 Slop Cut Receiver	2/56
315/3207 Product Receiver	2/56
315/3208 Product Receiver	2/56
315/3222 B2D Receiver	5/60
315/3225 B2D Receiver	12/60
315/3226 B2D Receiver	12/60
315/3227 Weigh Tank	12/60
315/3235 MVE Weigh Tank	11/62
315/3241 Receiver	12/62
315/3242 Receiver	12/62
315/3243 Receiver	12/62
315/3245 Toluene Tank	5/65
315/3246 Toluene Tank	5/65
315/3248 Catalyst Feed Tank	8/67
315/3249 VP Charge Tank	5/55
315/3250 Alcohol Tank	6/68
315/3251 MA Weigh Tank	10/69
315/3254 Decant Tank	11/57
315/3263 Alcohol Head Tank	12/85
315/3264 VP Head Tank	12/85
315/3265 Catalyst Charge Pot	12/85
315/3275 Monomer Charge Pot	9/87
315/3276 Charge Pot	9/87
315/3281 NH_4OH Charge Pot	4/89
315/3282 H_2O_2 Charge Pot	4/89
315/3283 Catalyst Add. Tank	8/90
315/3284 Monomer Add. Tank	8/90
315/3285 Charge Pot	8/90
315/3286 Catalyst Charge Pot	8/90
315/3287 H_2SO_4 Charge Pot	8/90

Section K Equipment listing	
Process Equipment	**Date Commenced**
315/3289 Catalyst Charge Pot	11/90
315/3290 Overhead Receiver	3/91
315/3291 Eductor	3/91
315/3292 VA Head Tank	11/89
315/3293 Solvent Receiver	8/91
315/3294 Copolymer Cat. Pot	3/92
315/3295 Catalyst Pot	6/92
315/3296 Catalyst Charge Pot	6/93
315/3297 Catalyst Charge Pot	6/93
315/3299 Alcohol Head Tank	Unknown
315/3300 B2D Hydrogenator	5/56
315/3301 Distillation Kettle	11/57
315/3302 Polymerizer	11/57
315/3303 Polymerizer	11/57
315/3304 Polymerizer	11/57
315/3305 Blend Tank	2/56
315/3306 Polymerizer	11/90
315/3307 B2D Dist. Reactor	3/75
315/3308 Blend Tank	7/60
315/3310 Dryer	8/63
315/3311 Dryer	8/63
315/3312 Polymerizer	3/64
315/3313 Hold Tank	3/64
315/3315 Polymerizer	4/86
315/3404 Column Still	4/94
315/3504 Thin Film Evaporator	3/1/75
315/3523 Decant Tank	2/63
315/3609 Fabric Filter	1/63
315/3610 Fabric Filter	8/64
315/3665 Screener	11/92
315/3710 Hopper	11/92
200 Building	
200/3202 NH_4OH Storage Tank	1/55
200/3204 Dryer Feed Tank	5/55

Section K Equipment listing	
Process Equipment	**Date Commenced**
200/3205 Receiver Tank	1/65
200/3206 Receiver Tank	1/65
200/3207 Dryer Feed Tank	2/65
200/3210 Catalyst Charge Pot	1/65
200/3211 Catalyst Charge Pot	12/66
200/3212 Catalyst Charge Pot	12/66
200/3213 Catalyst Charge Pot	7/65
200/3214 H_2O_2 Charge Pot	12/66
200/3215 NH_4OH Pot	12/66
200/3216 Head Tank	12/66
200/3217 VP Head Tank	12/66
200/3220 Charge Pot	12/68
200/3221 Charge Pot	12/68
200/3224 Catalyst Charge Pot	Unknown
200/3226 Charge Pot	9/86
200/3228 Receiver Tank	2/89
200/3231 Separator	8/91
200/3301 Reactor	6/56
200/3302 Reactor	6/56
200/3501 Steam Spray Dryer	Modified 1998
200/3502 Gas Spray Dryer	Modified 1997
200/3613 Screener	4/65
200/3701 Primary Cyclone	6/55
200/3702 Primary Cyclone	6/55
200/3704 Drumming Hopper	4/55
200/3705 Primary Cyclone	10/64
200/3708 Drumming Hopper	3/65
200/3712 Dustex Cyclone	11/67
200/3717 Secondary Cyclone	4/88
200/3718 Secondary Cyclone	11/93
210/3303 Reactor	12/66
210/3304 Reactor	12/66
334 Building	
334/3506 PVP Ribbon Blender	9/89

Section K Equipment listing	
Process Equipment	**Date Commenced**
334/3507 PVP Ribbon Blender	1/88
334/3715 Surge Hopper	6/88
334/3717 Ribbon Blender	3/88
334/5329 Iodine Charger	Unknown
326 Batch Process Area	
326/3205 Buffer Tank	9/60
326/3208 Buffer Tank	10/62
326/3217 Buffer Tank	9/65
326/3301 B Prep Kettle	6/56
326/3302 Vinylator A	6/56
326/3303 Vinylator B	6/62
326/3304 C&D Prep Kettle	4/63
326/3305 Vinylator B	10/62
326/3306 Vinylator A	11/65
326/3827 Vinyl Cooler C	11/89
326/3831 Vinyl Cooler A	10/91
326/3830 Vinyl Cooler B	5/92
326/3835 Vinyl Cooler D	10/92
Gateway Facility	
Catalyst Pot 1	7/1/1999 (estimated)
Catalyst Pot 2	7/1/1999 (estimated)
Catalyst Pot 3	7/1/1999 (estimated)
Monomer Storage Tank	7/1/1999 (estimated)
Solvent Storage Tank	7/1/1999 (estimated)
Solvent Storage Tank	7/1/1999 (estimated)
Reactor	7/1/1999 (estimated)
Feed Tank/Receiver	7/1/1999 (estimated)
Hold Tank	7/1/1999 (estimated)
Filters	7/1/1999 (estimated)
Feed Tank/Receiver	7/1/1999 (estimated)

Section K Equipment listing	
Process Equipment	**Date Commenced**
Utilities	
115/5307 Riley Boiler	1964
115/5303 Babcock and Wilcox Boiler	1955
115/5304 Wickes Boiler	1958
115/5306 E. Paracymene Heater	1961
115/5328 Zurn Boiler	1972 (installed 11/86 at ISP)
126/5301 W. Paracymene Heater	1990
North Cooling Tower #1	1956
North Cooling Tower #2	1960
South Cooling Tower #3	1966
South Cooling Tower #4	1985